
Fluid power systems and components — Cylinders — Identification code for mounting dimensions and mounting types

*Transmissions hydrauliques et pneumatiques — Vérins — Code
d'identification des dimensions de montage et des modes de fixation*



Reference number
ISO 6099:2009(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6099 was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 3, *Cylinders*.

This fourth edition cancels and replaces the third edition (ISO 6099:2001), which has been technically revised.

Introduction

In fluid power systems, power is transmitted and controlled through a fluid (liquid or gas) under pressure within an enclosed circuit. Systems and their components are generally designed and marketed for a specific fluid pressure.

One such component is the fluid power cylinder. This is a device which converts power into linear mechanical force and motion. It consists of a movable element, i.e. a piston and piston rod, operating within a cylindrical bore.

Although this International Standard provides a code and means of dimensioning for cylinder mounting, it is not intended that all dimensions be standardized. The code specified in this International Standard is not to be considered as complete for the development of future interchangeability standards. It establishes uniform descriptions for dimensions and achieves conformity of language.

The code can be used for analogous dimensions when this involves neither confusion nor misunderstanding.

Fluid power systems and components — Cylinders — Identification code for mounting dimensions and mounting types

1 Scope

This International Standard establishes a convention for the identification of mounting dimensions and types used in the mounting of fluid power cylinders. It specifies a code for identifying cylinder mounting, envelope, accessory and connector dimensions, and for cylinder mounting and accessory types.

This International Standard does not represent a standard list of all fluid power cylinder mounting and accessory types.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5598, *Fluid power systems and components — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5598 apply.

4 Identification code for rod end types

4.1 Reference points and letter codes

4.1.1 General

4.1.1.1 First point of reference

Axial dimensions are determined from a reference point that is the same for all cylinders, whatever their mounting method. This theoretical reference point (TRP) is the point of force transfer from the piston rod to the movable element. This point of reference (TRP) is named the first TRP.

4.1.1.2 Second point of reference

For double rod cylinders, the second TRP is defined by the letter code ZM++ directly attached to the first point of TRP (see Figure 8). This second TRP is used for accessories on the second rod side.

4.1.2 Plain rod end

For a plain rod end, the reference point is located on the rod centreline at the end of the piston rod. See Figure 1.

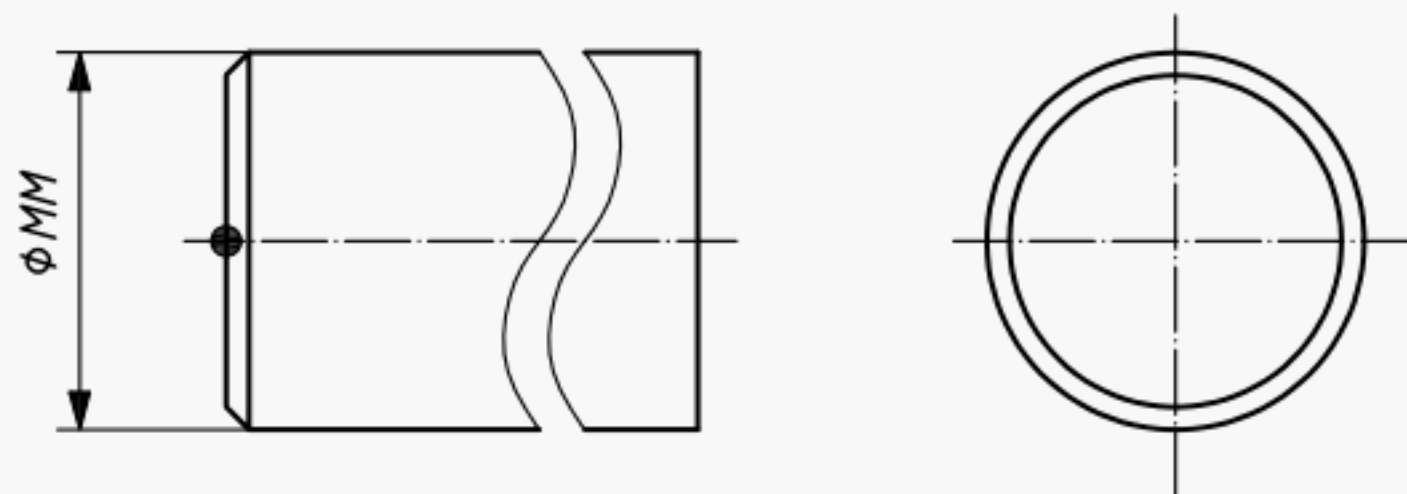


Figure 1 — RPE_x : Plain rod end

4.1.3 Pin rod end

For a pin rod end, the reference point is located at the intersection of the pin and piston rod centrelines. See Figure 2.

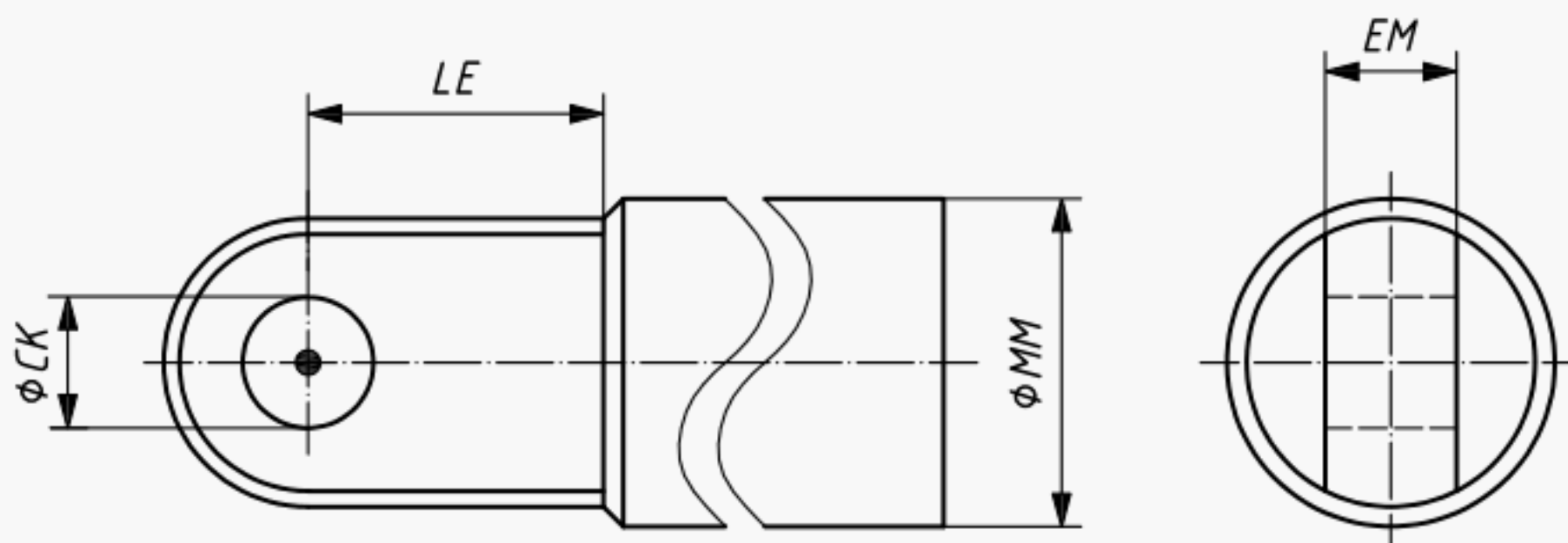


Figure 2 — RPR_x : Pin rod end

4.1.4 Female threaded rod end

For a female threaded rod end, the reference point is located on the rod centreline at the end of the piston rod. See Figure 3.

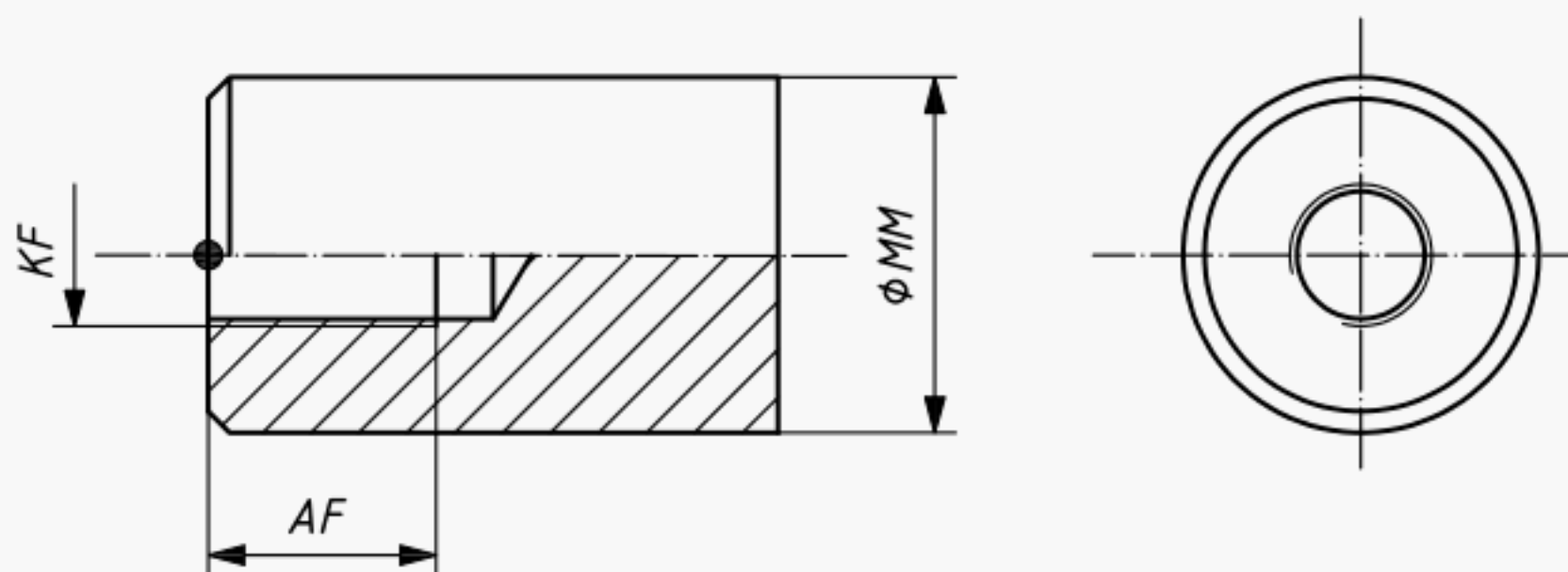


Figure 3 — RTF_x : Female threaded rod end

4.1.5 Male threaded rod end

For a male threaded rod end, the reference point is located on the rod centreline, at the shoulder level. See Figure 4.

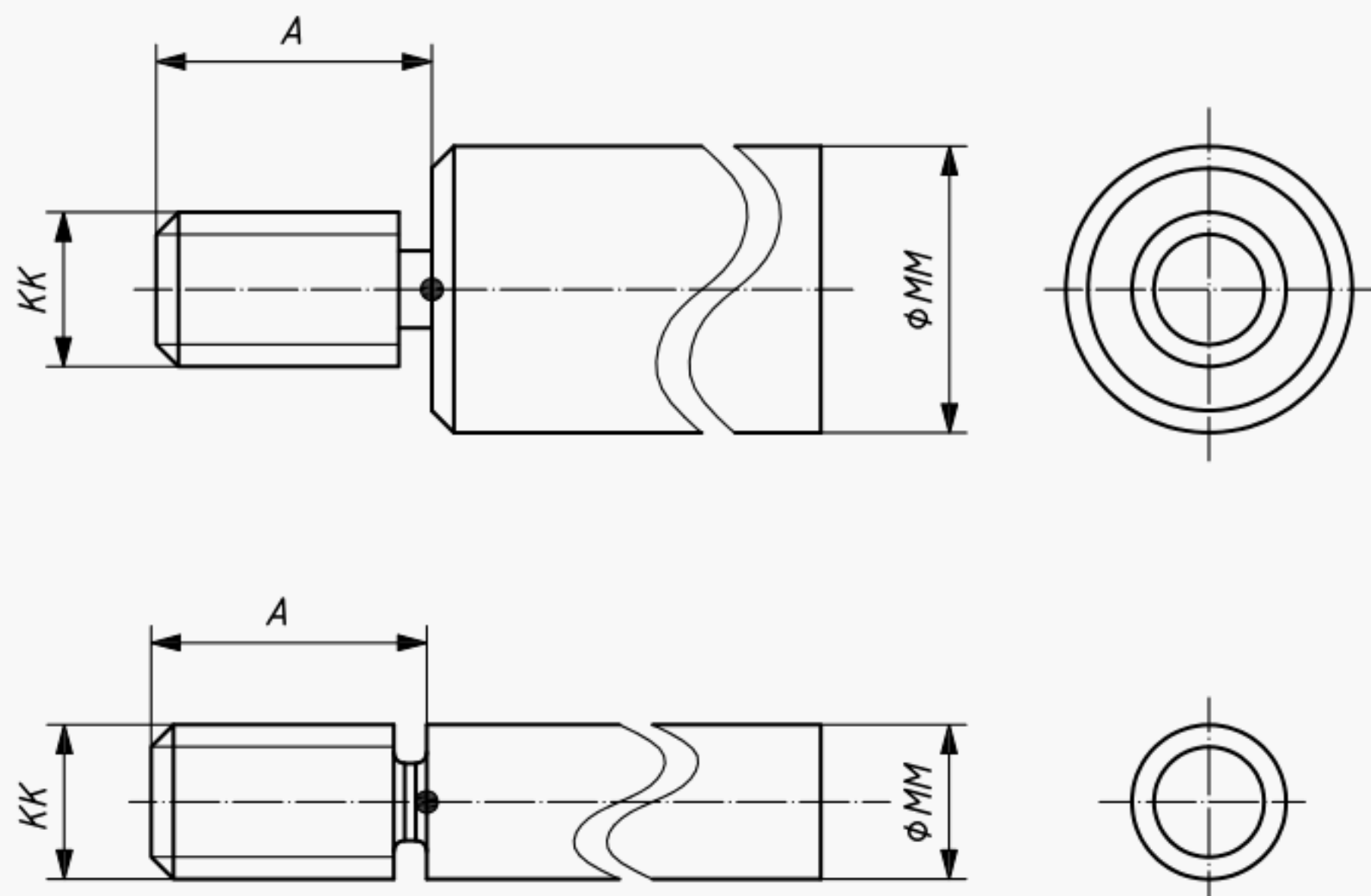
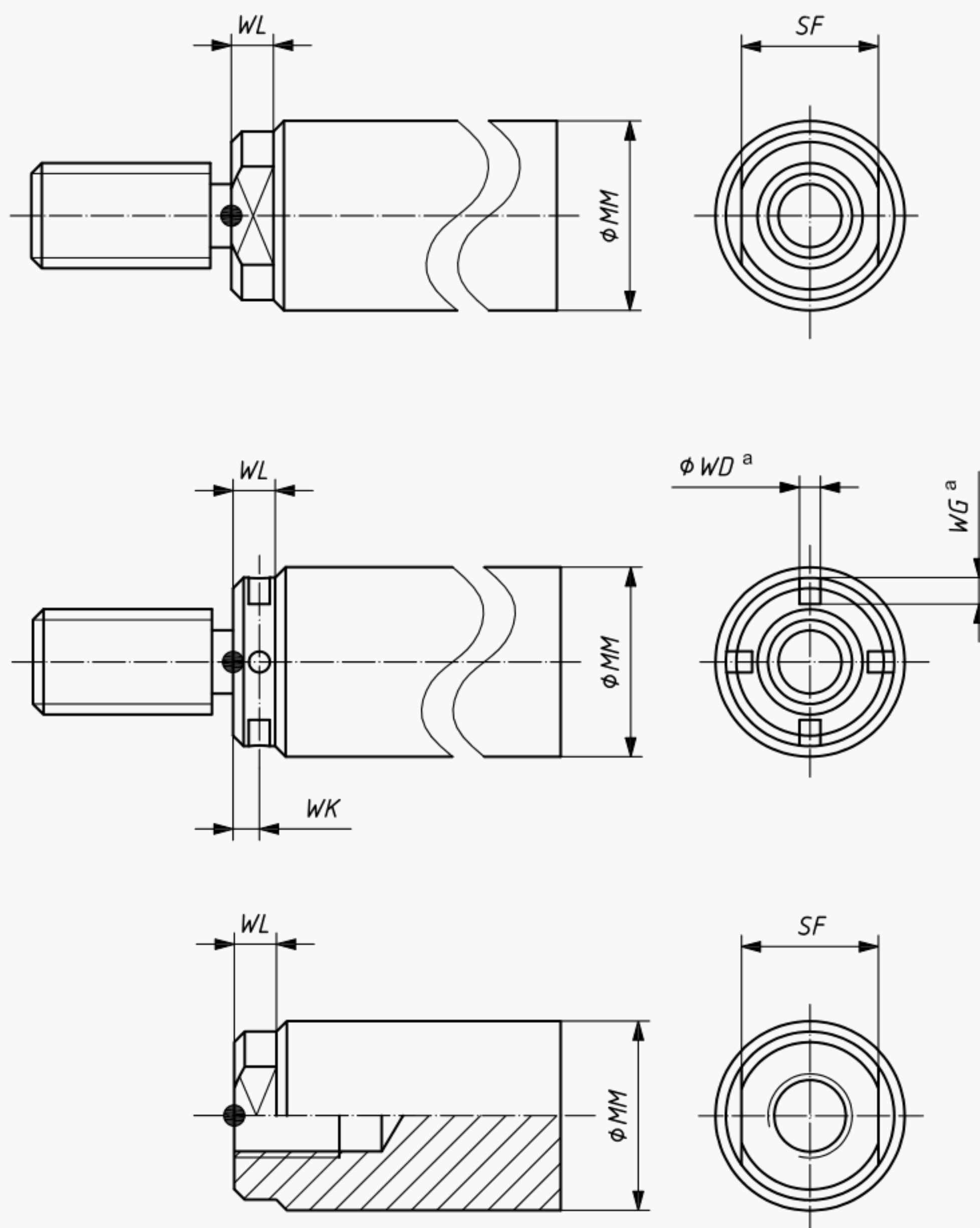


Figure 4 — RTM_x : Male threaded rod end

4.1.6 Wrench flat piston rod end or hook wrench holes

For a wrench flat piston rod end or hook wrench holes, the reference point is located on the wrench flat or hook wrench holes, centreline and the piston rod centreline. See Figure 5.



^a Optional.

Figure 5 — Wrench flat piston rod end or hook wrench holes

4.1.7 Flanged piston rod end — Alternative reference points

For a flanged piston rod end, the reference point is either located on the rod centreline at the end of the piston rod (see Figure 6) or on the rod centreline at the shoulder level (see Figure 7).

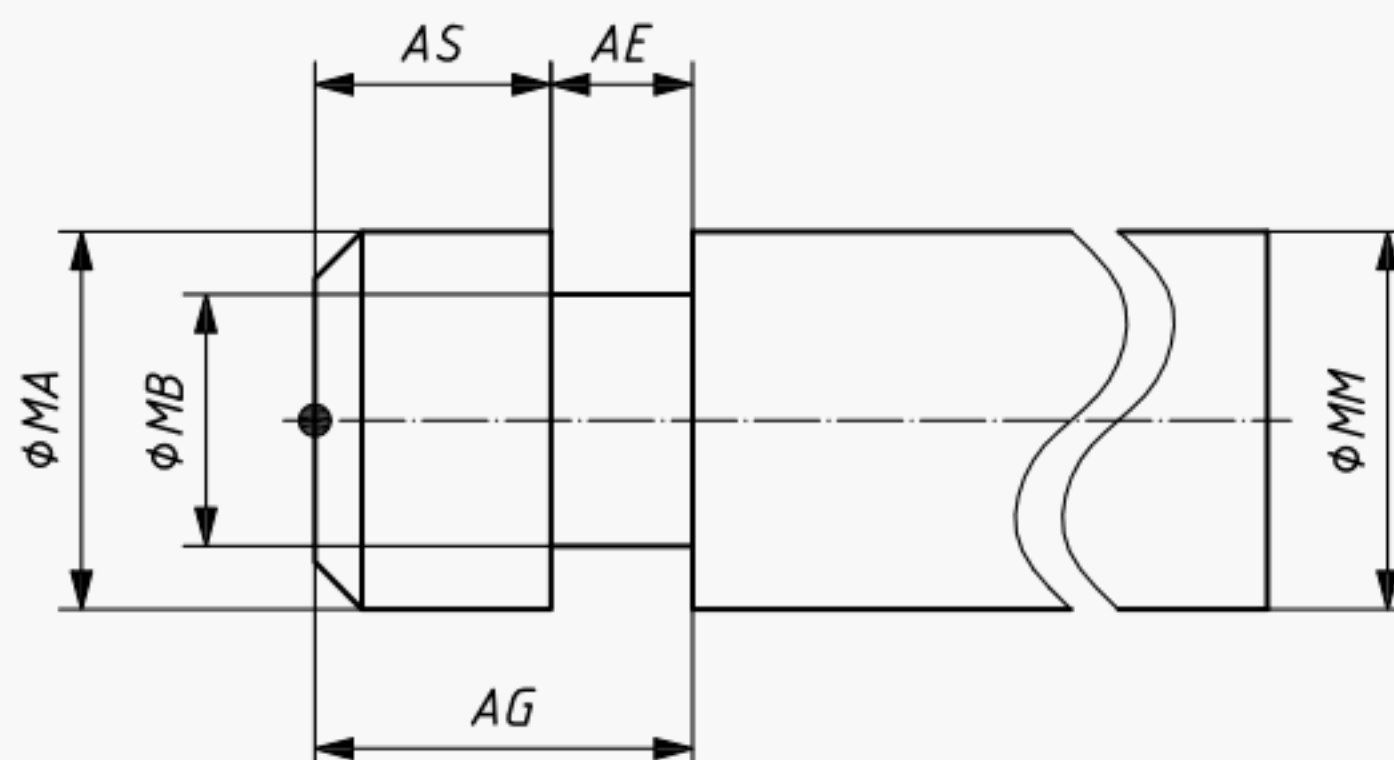


Figure 6 — RFE_x : Flanged piston rod end with TRP at the end of the piston rod

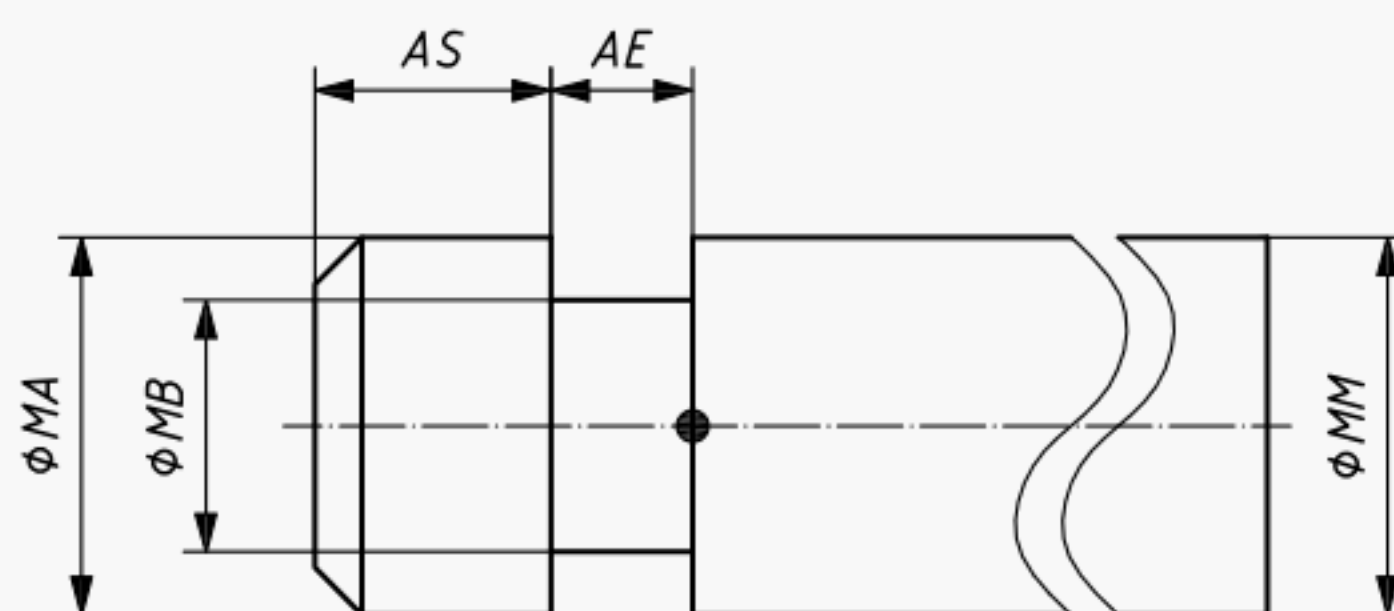


Figure 7 — RFS_x : Flanged piston rod end with TRP at the shoulder level

4.2 Identification code

The identification code for the rod end types is given in Table 1.

Table 1 — Identification code

| Identification code | Description |
|---------------------|---|
| RTM_x | Male threaded rod end |
| RTF_x | Female threaded rod end |
| RPE_x | Plain rod end |
| RPR_x | Pin rod end |
| RFE_x | Flanged piston rod end with TRP at the end of the piston rod |
| RFS_x | Flanged piston rod end with TRP at the shoulder level |
| x | Is designated for the wrench flats or hook wrench: 0 = none 1 = wrench flats 2 = hook wrench |

5 Letter code for identifying cylinder mounting, envelope and accessory dimensions

5.1 General

The code for identifying cylinder mounting, envelope and accessory dimensions is composed of one or two letters and, in some cases, the signs: +, ++ or +/.

The meaning of these letters and signs is given in 5.2 to 5.5.

5.2 Letter *Z*

Any group of two letters beginning with *Z* identifies a longitudinal envelope dimension.

5.3 Letter *U*

Any group of two letters beginning with *U* identifies an end view envelope dimension.

5.4 Letters *W*, *X*, *Y*, *Z*

Any group of two letters beginning with *W*, *X*, *Y* or *Z* identifies a dimension end from the reference point.

5.5 Signs

The sign + after letters means that the stroke is to be added:

$$ZJ + = ZJ \text{ plus stroke.}$$

The sign ++ after letters means that twice the stroke is to be added:

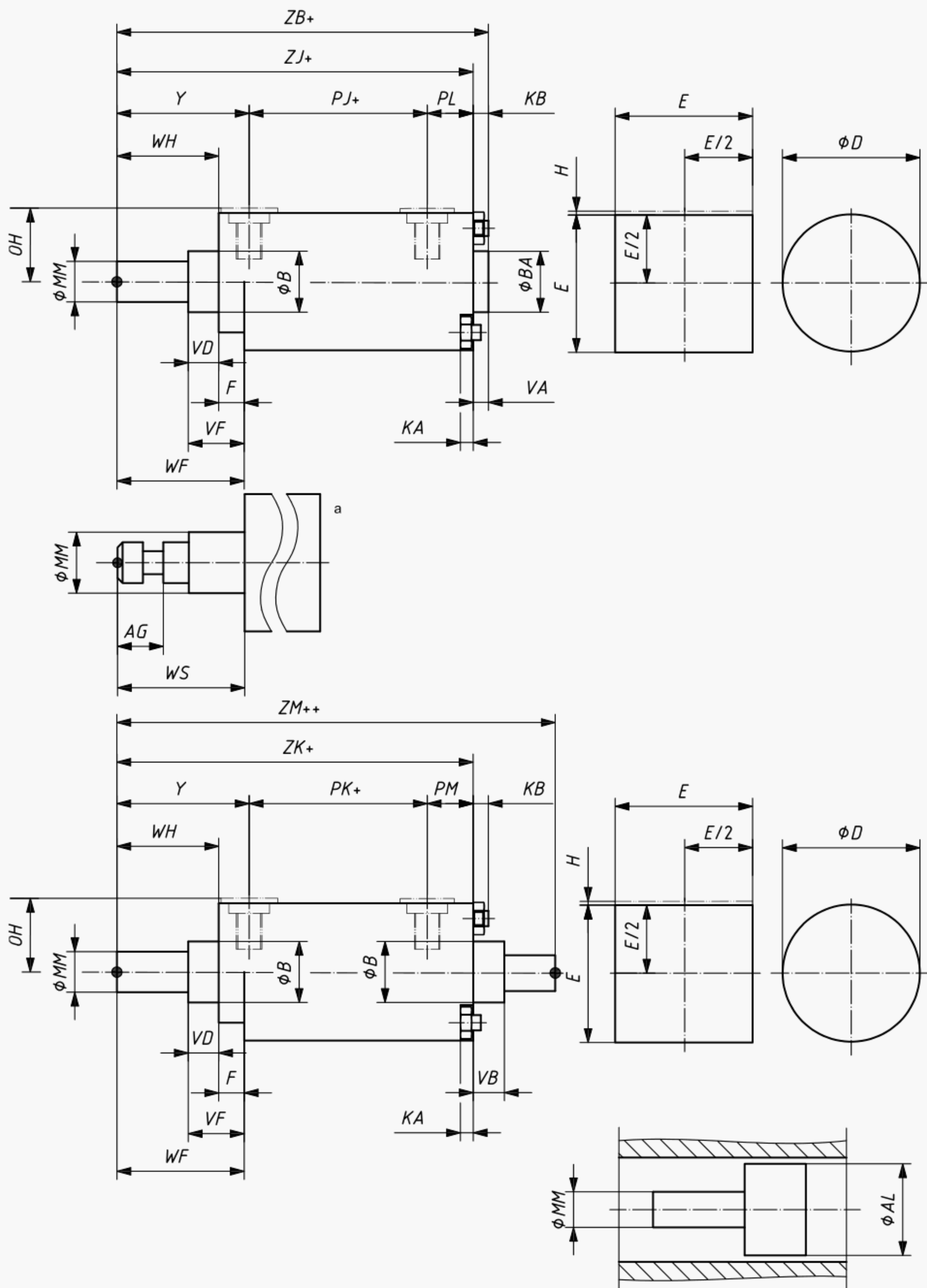
$$ZM ++ = ZM \text{ plus twice the stroke.}$$

The sign +/ after letters means that half the stroke is to be added:

$$XV +/ = XV \text{ plus half the stroke.}$$

5.6 Dimensioning

The general dimensions are shown in Figure 8.



a Refer to Figure 6.

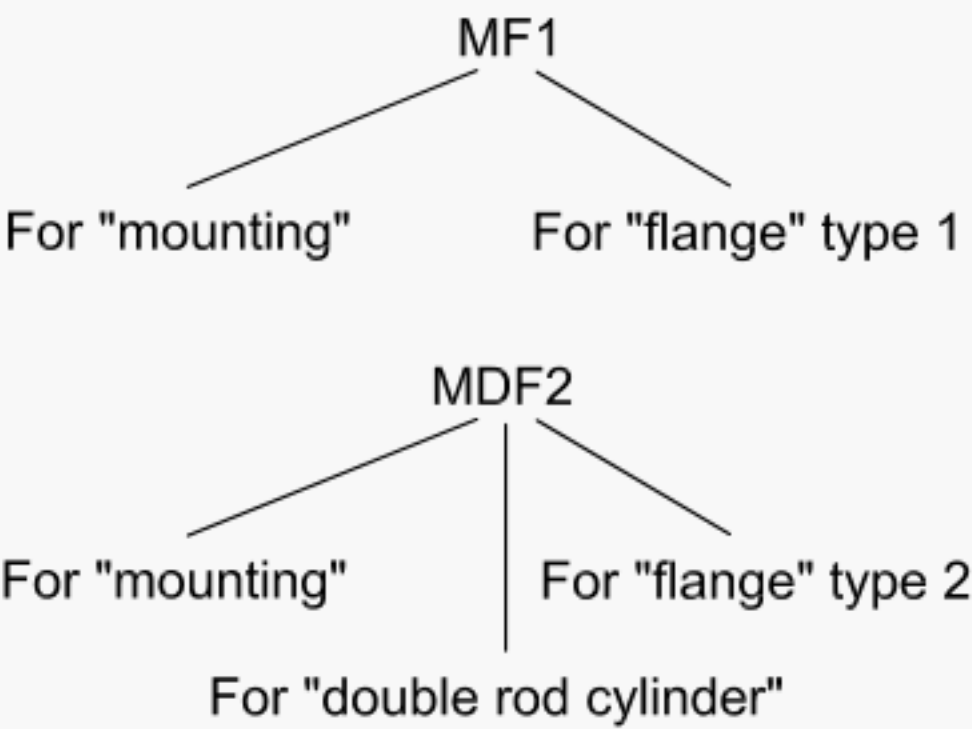
Figure 8 — Arrangement of general cylinder dimensions

6 Identification code for mounting types

6.1 General

The identification code for cylinder mounting types consists of two or three letters and a number.

EXAMPLE



The following letters may be used in place of the letter designating flanges used in the above examples.

| Letter | Mounting type |
|--------|---------------------|
| B | body |
| E | cap or head |
| F | flange (detachable) |
| P | pivot |
| R | threaded nose |
| S | foot or lugs |
| T | trunnion |
| X | studs or tie rods |

6.2 Mounting types

The mounting types defined in this International Standard are given with their identifying code in Table 2.



Table 2 — Mounting types

| Identification code | Description | Figure |
|---------------------|---|--------|
| MB 1 | Body, through bolt hole | 9 |
| MDB 1 | Body, through bolt hole — Double rod | 10 |
| MB 2 | Round, through bolt hole | 11 |
| MDB 2 | Round, through bolt hole — Double rod | 12 |
| ME 5 | Head, rectangular | 13 |
| MDE 5 | Head, rectangular — Double rod | 14 |
| ME 6 | Cap, rectangular | 15 |
| ME 7 | Head, round | 16 |
| MDE 7 | Head, round — Double rod | 17 |
| ME 8 | Cap, round | 18 |
| ME 9 | Head, square | 19 |
| MDE 9 | Head, square — Double rod | 20 |
| ME 10 | Cap, square | 21 |
| ME 11 | Head, square | 22 |
| MDE 11 | Head, square — Double rod | 23 |
| ME 12 | Cap, square | 24 |
| MF 1 | Head, rectangular flange | 25 |
| MDF 1 | Head, rectangular flange — Double rod | 26 |
| MF 2 | Cap, rectangular flange | 27 |
| MF 3 | Head, circular flange | 28 |
| MDF 3 | Head, circular flange — Double rod | 29 |
| MF 4 | Cap, circular flange | 30 |
| MF 5 | Head, square flange | 31 |
| MDF 5 | Head, square flange — Double rod | 32 |
| MF 6 | Cap, square flange | 33 |
| MF 7 | Head, circular flange centred on the rear side | 34 |
| MDF 7 | Head, circular flange centred on the rear side — Double rod | 35 |
| MF 8 | Head, rectangular flange with two holes | 36 |
| MP 1 | Cap, fixed clevis | 37 |
| MP 2 | Cap, detachable clevis | 38 |
| MP 3 | Cap, fixed plain eye | 39 |
| MP 4 | Cap, detachable plain eye | 40 |
| MP 5 | Cap, fixed eye with spherical bearing | 41 |
| MP 6 | Cap, detachable eye with spherical bearing | 42 |
| MP 7 | Head, detachable clevis | 43 |
| MR 3 | Head, threaded | 44 |
| MDR 3 | Head, threaded — Double rod | 45 |
| MR 4 | Cap, threaded | 46 |

Table 2 (continued)

| Identification code | Description | Figure |
|---------------------|---|--------|
| MS 1 | End angles | 47 |
| MDS 1 | End angles — Double rod | 48 |
| MS 2 | Side lugs | 49 |
| MDS 2 | Side lugs — Double rod | 50 |
| MS 3 | Head angle | 51 |
| MT 1 | Head, integral trunnion (male) | 52 |
| MDT 1 | Head, integral trunnion (male) — Double rod | 53 |
| MT 2 | Cap, integral trunnion (male) | 54 |
| MT 4 | Intermediate trunnion (male) fixed or mobile | 55 |
| MDT 4 | Intermediate trunnion (male) fixed or mobile — Double rod | 56 |
| MT 5 | Head, detachable trunnion (male) | 57 |
| MT 6 | Cap, detachable trunnion (male) | 58 |
| MX 1 | Both ends studs or tie rods extended | 59 |
| MDX 1 | Both ends studs or tie rods extended — Double rod | 60 |
| MX 2 | Cap studs or tie rods extended | 61 |
| MDX 2 | Cap studs or tie rods extended — Double rod | 62 |
| MX 3 | Head studs or tie rods extended | 63 |
| MX 4 | Both ends 2 studs or tie rods extended | 64 |
| MDX 4 | Both ends 2 studs or tie rods extended — Double rod | 65 |
| MX 5 | Head, tapped | 66 |
| MDX 5 | Head, tapped — Double rod | 67 |
| MX 6 | Cap, tapped | 68 |
| MX 7 | Head, tapped, and cap studs or tie rods extended | 69 |
| MDX 7 | Head, tapped, and cap studs or tie rods extended — Double rod | 70 |
| MX 8 | Head and cap, tapped | 71 |
| MDX 8 | Head and cap, tapped — Double rod | 72 |

6.3 Letter codes of mounting and envelope dimensions according to cylinder mounting type

The letter code for mounting and envelope dimensions according to cylinder mounting type is shown in Figure 9 to Figure 72, and the designation is given in Table 4.

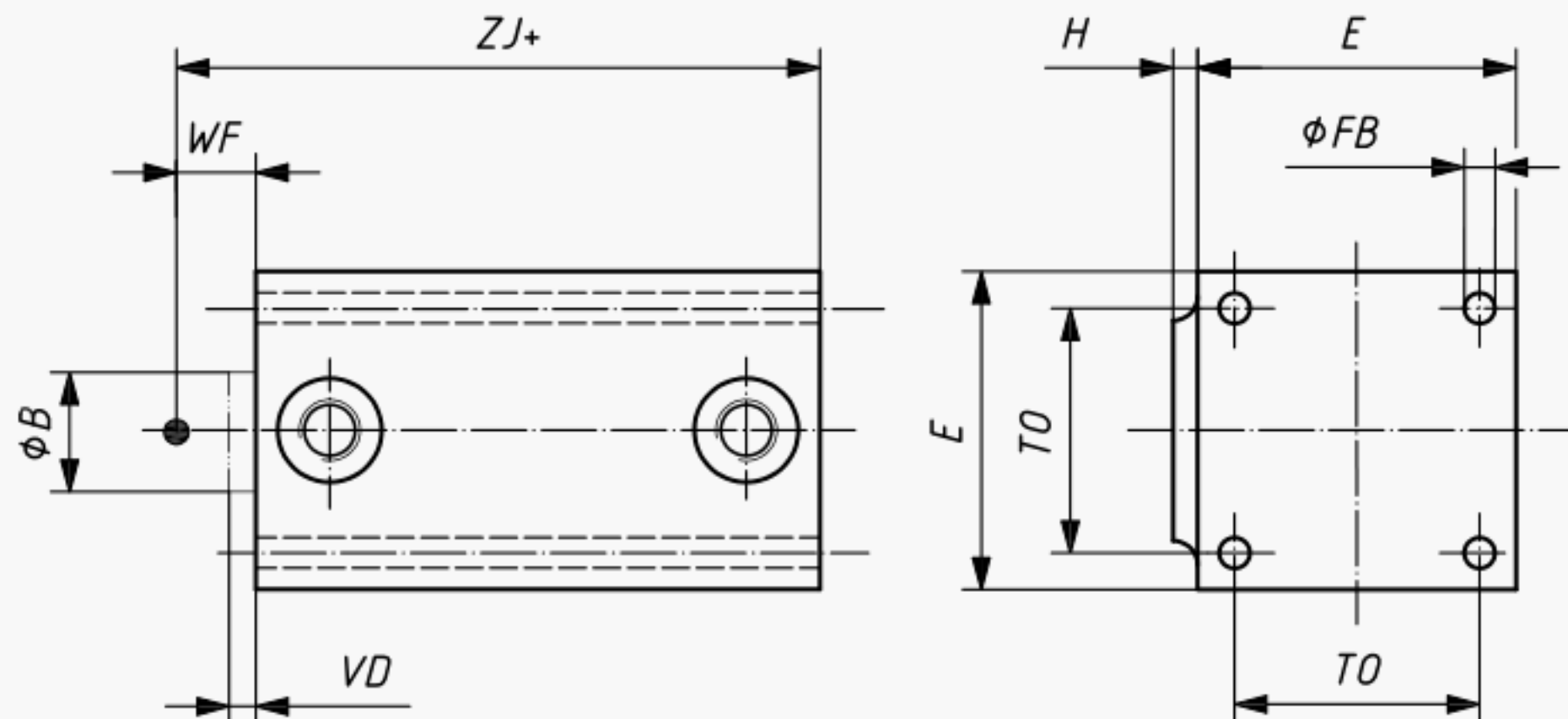


Figure 9 — MB 1: Body, through bolt hole

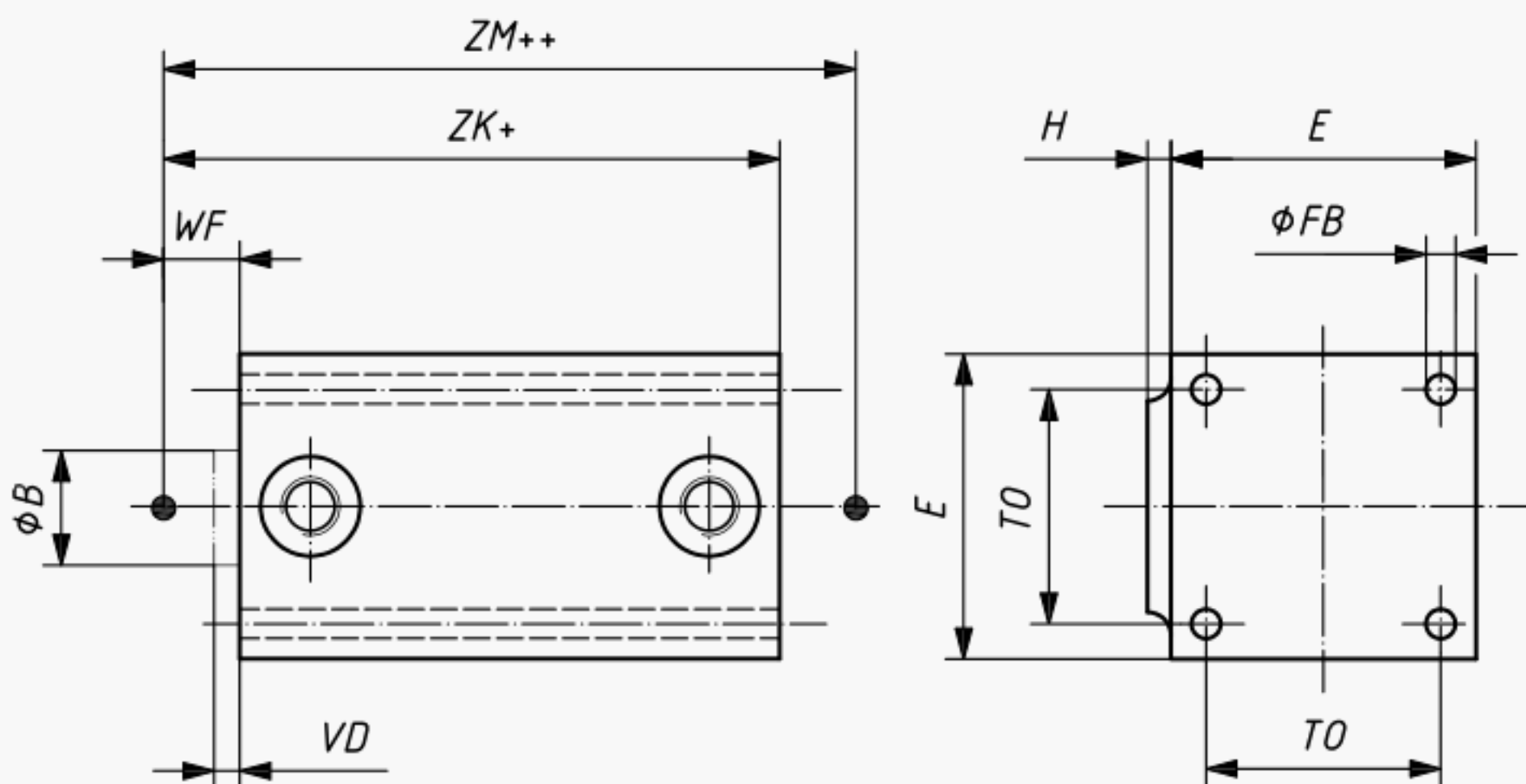


Figure 10 — MDB 1: Body, through bolt hole — Double rod

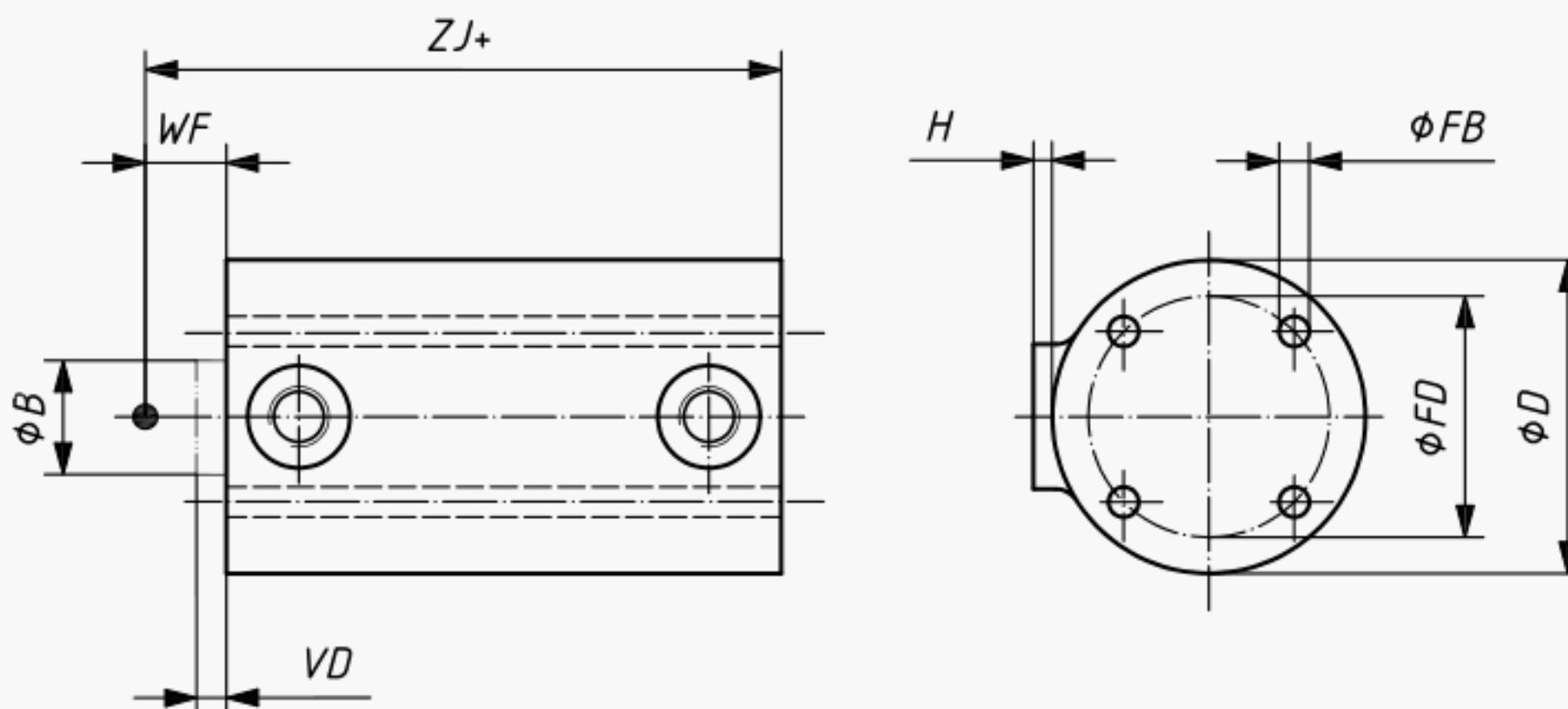


Figure 11 — MB 2: Round, through bolt hole

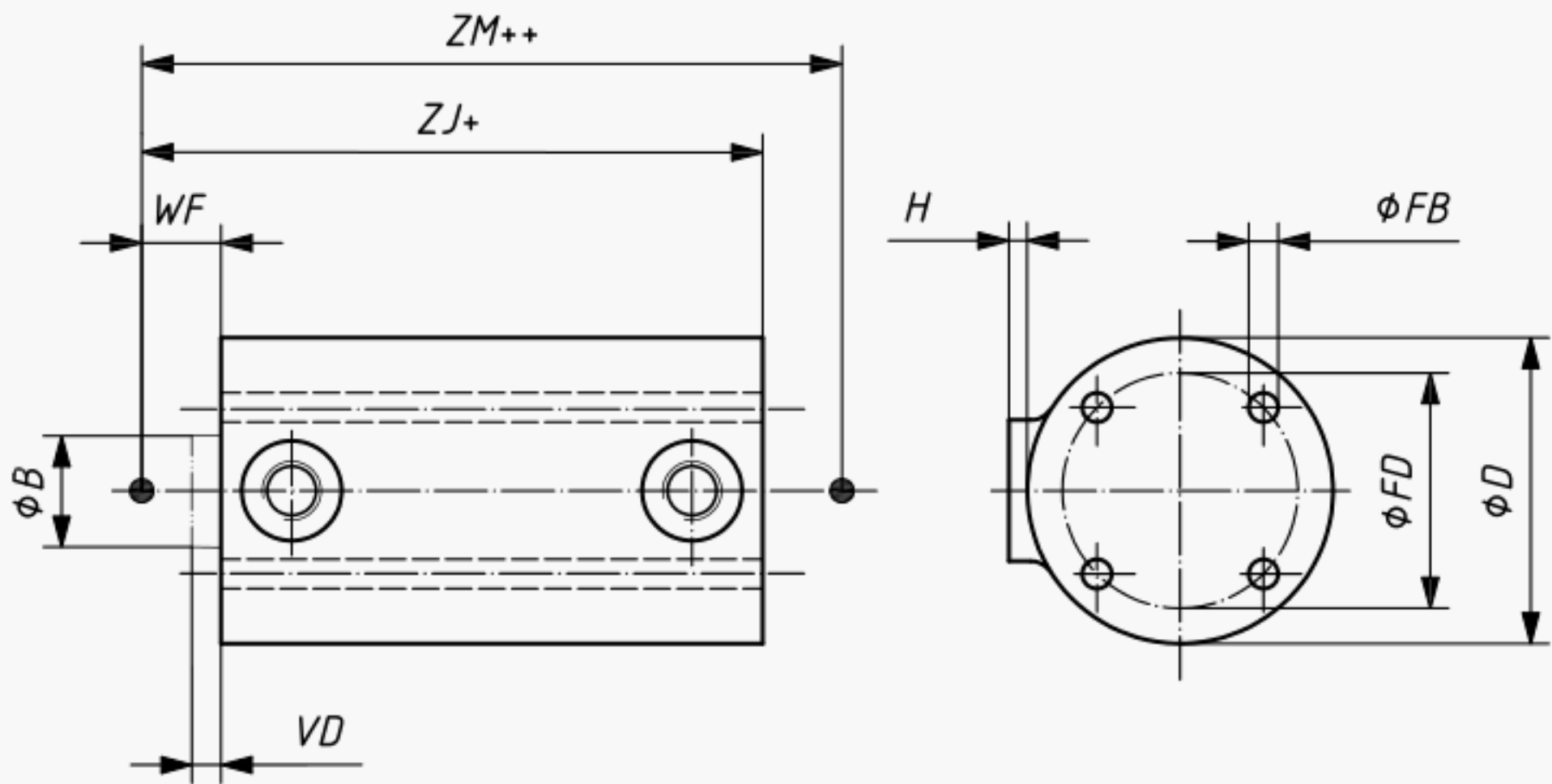


Figure 12 — MDB 2: Round, through bolt hole — Double rod

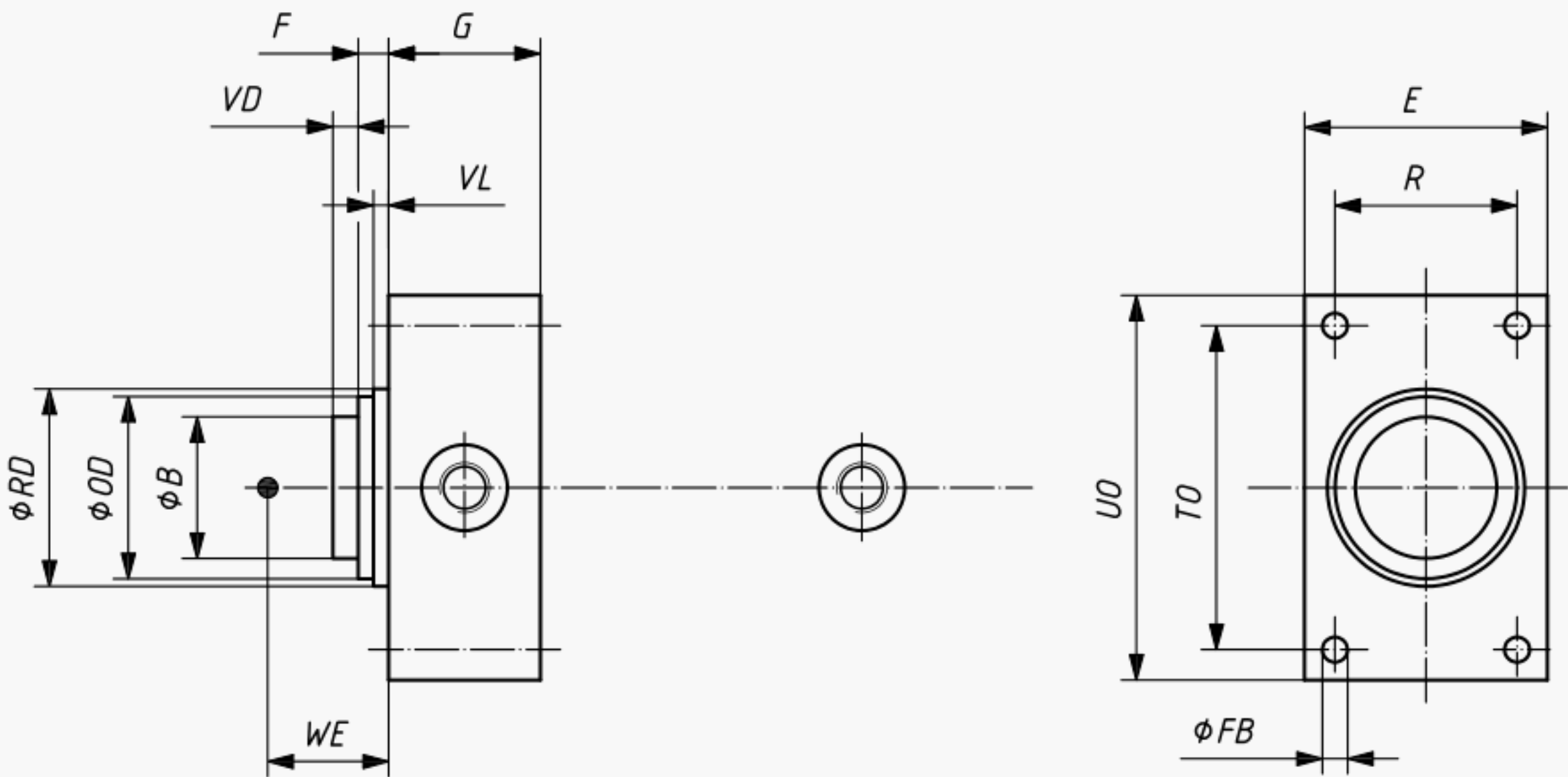


Figure 13 — ME 5: Head, rectangular

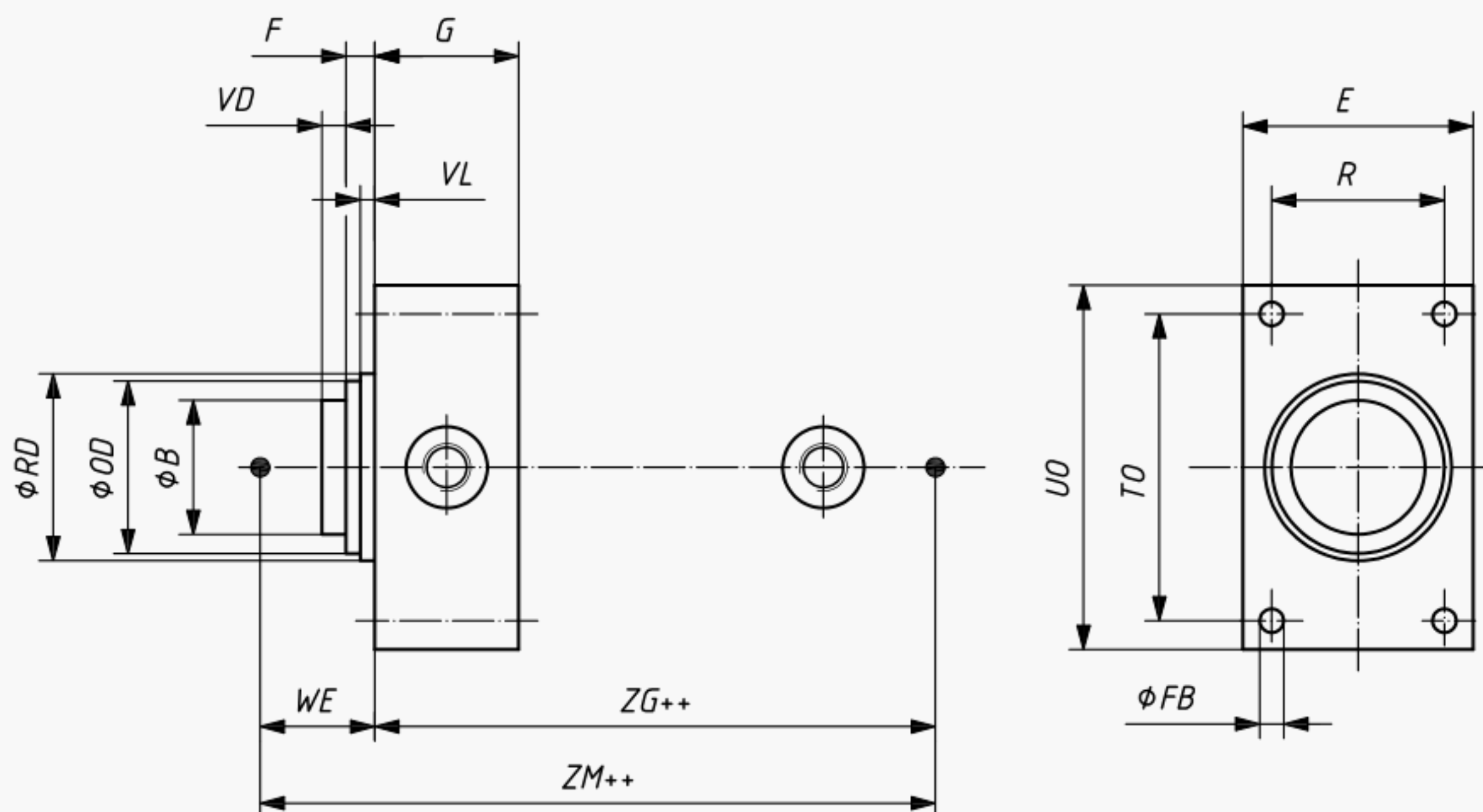


Figure 14 — MDE 5: Head, rectangular — Double rod

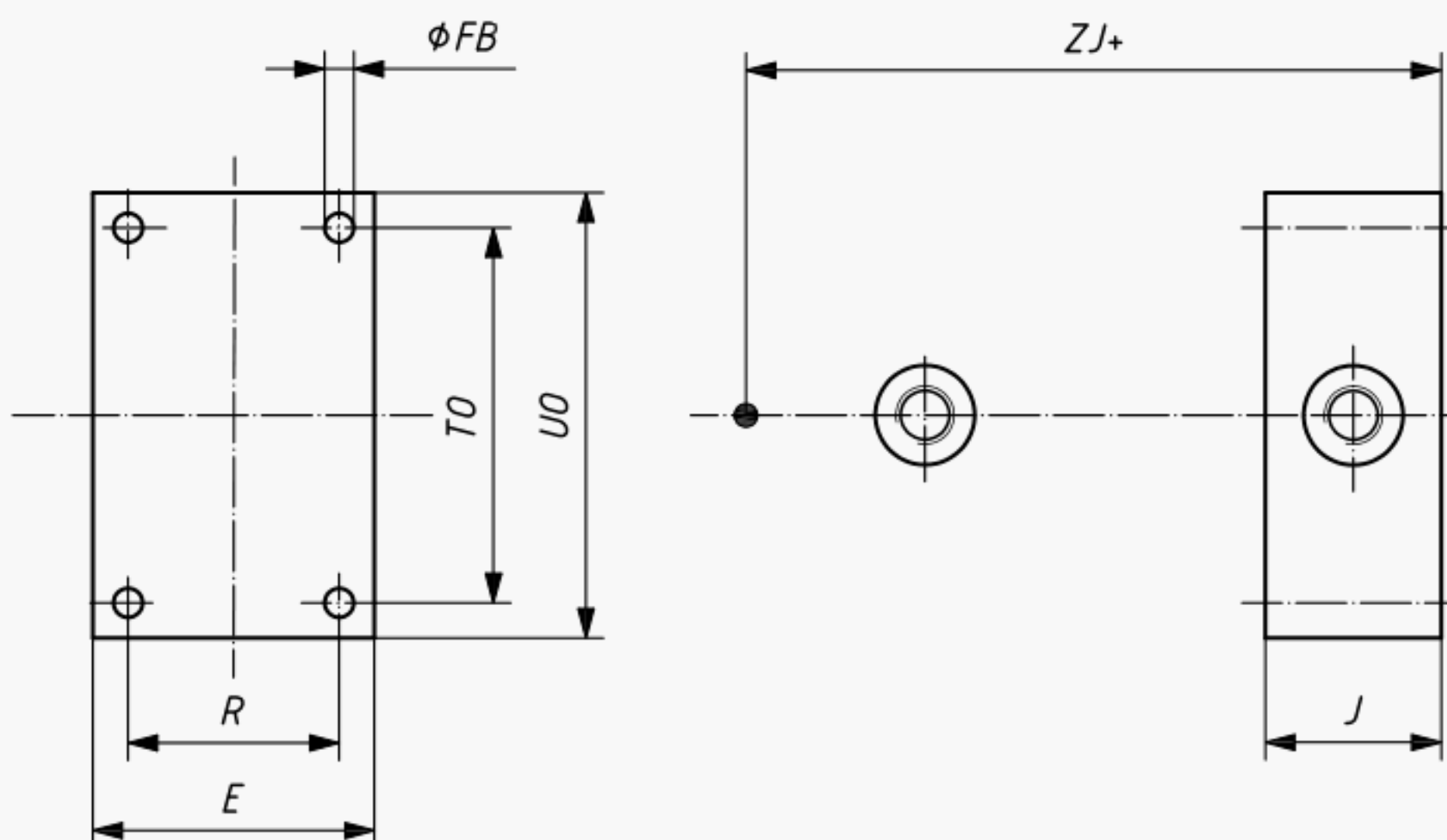


Figure 15 — ME 6: Cap, rectangular

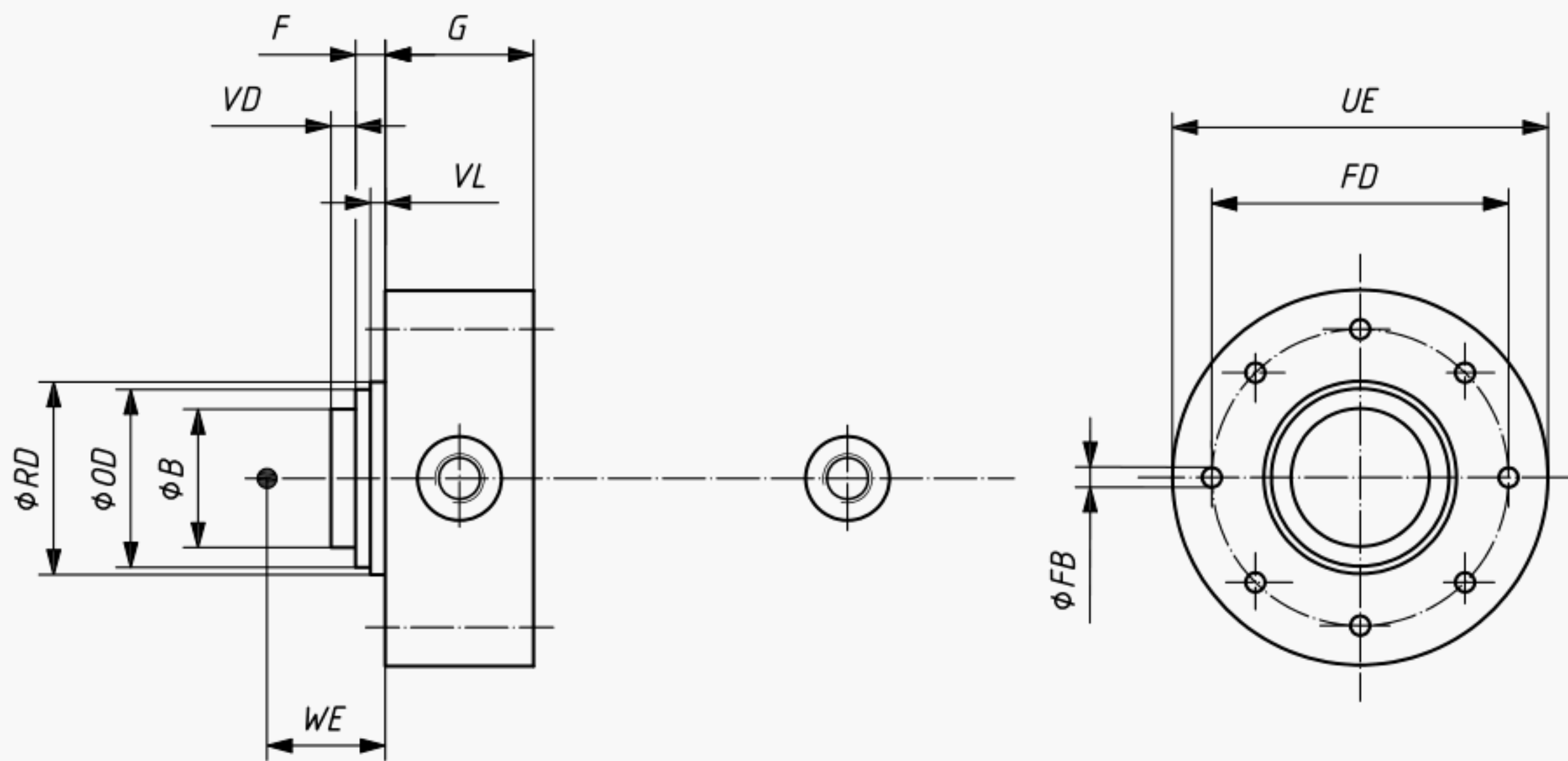


Figure 16 — ME 7: Head, round

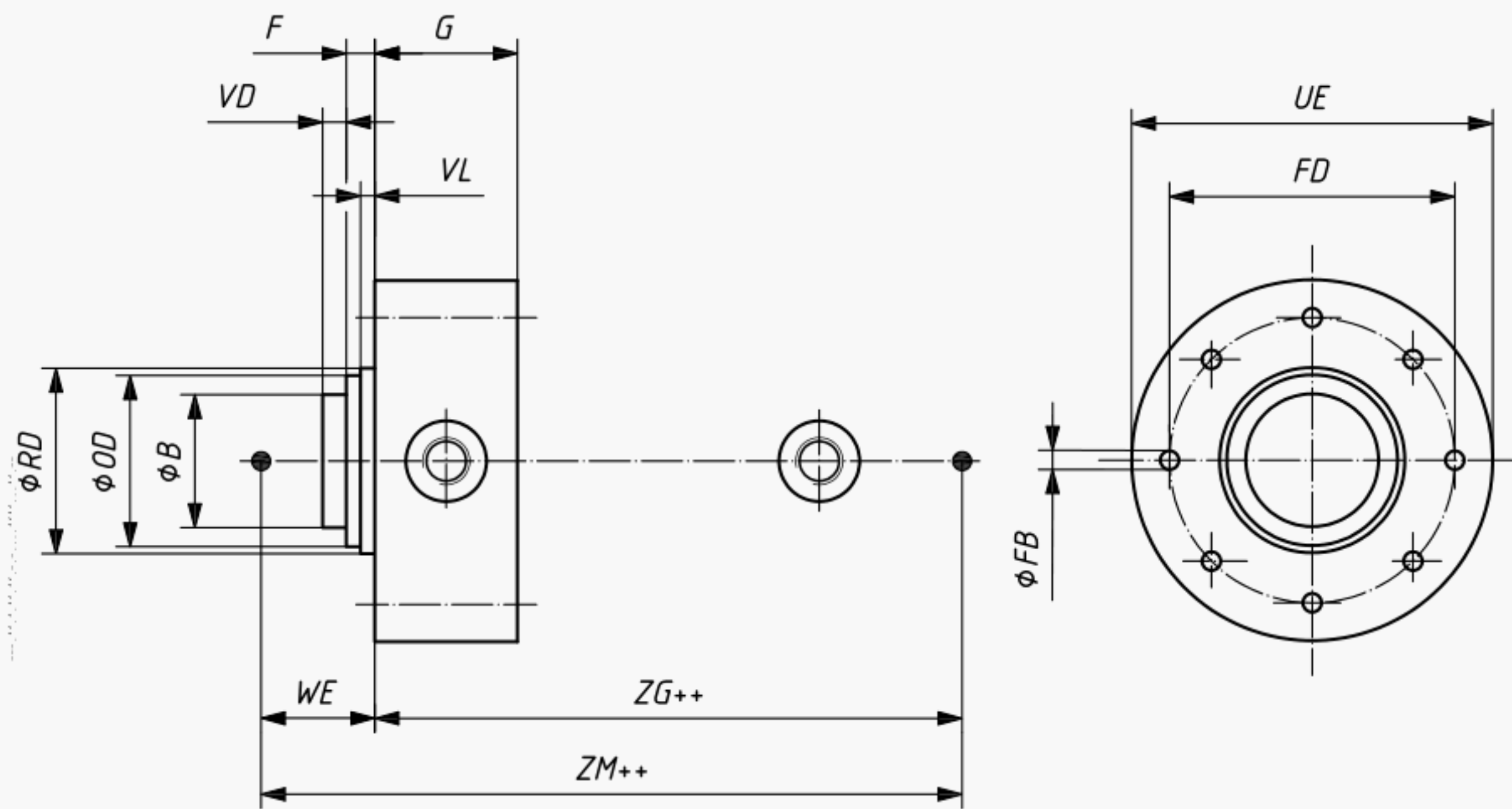


Figure 17 — MDE 7: Head, round — Double rod

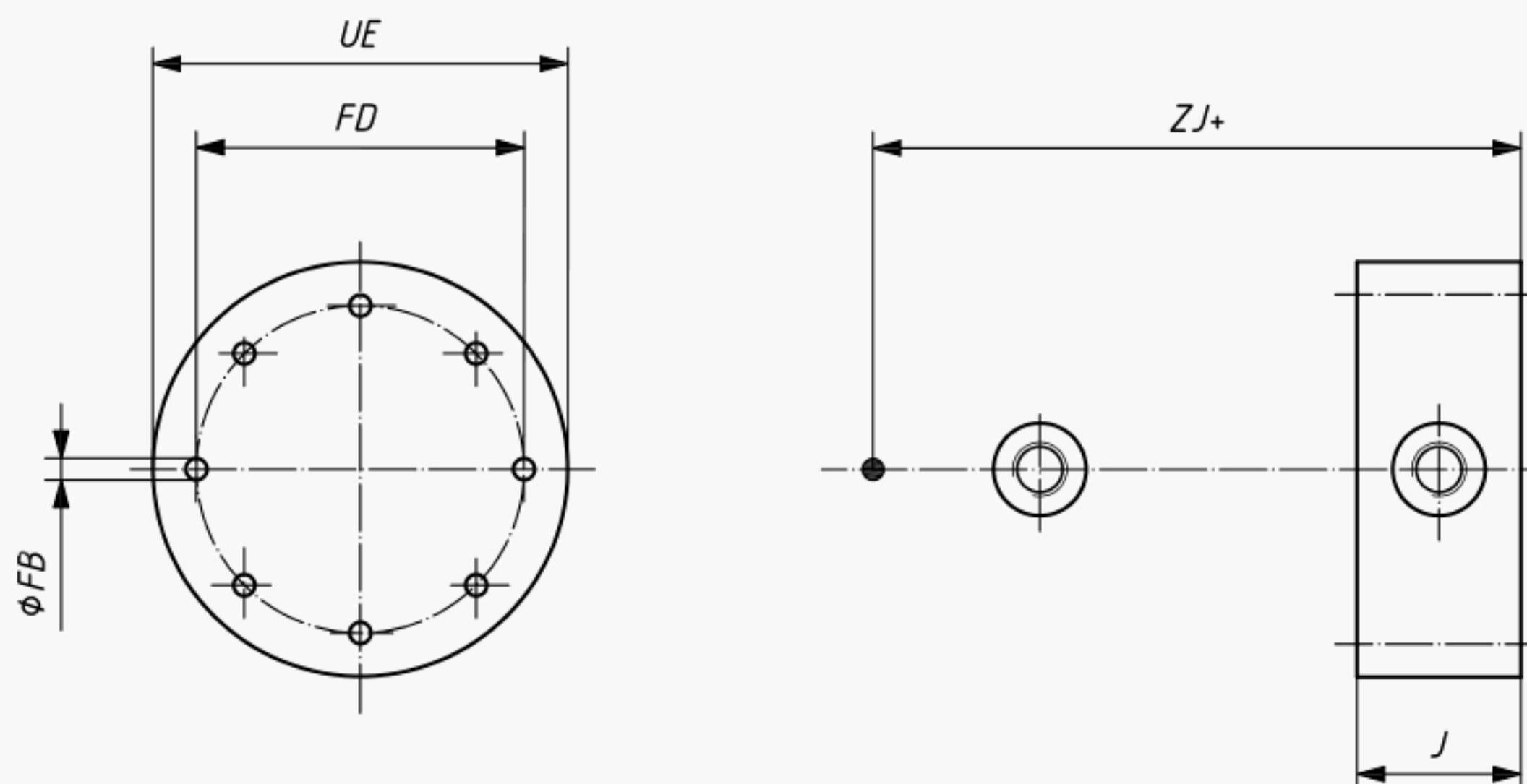


Figure 18 — ME 8: Cap, round

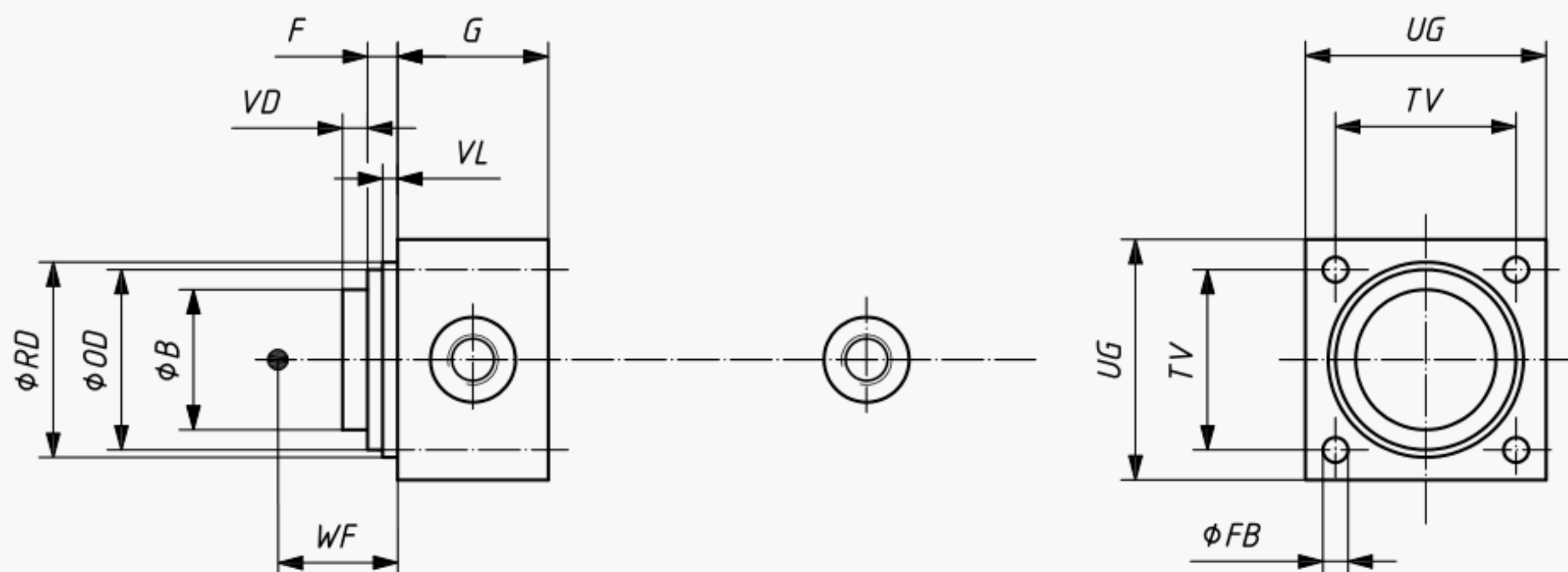


Figure 19 — ME 9: Head, square

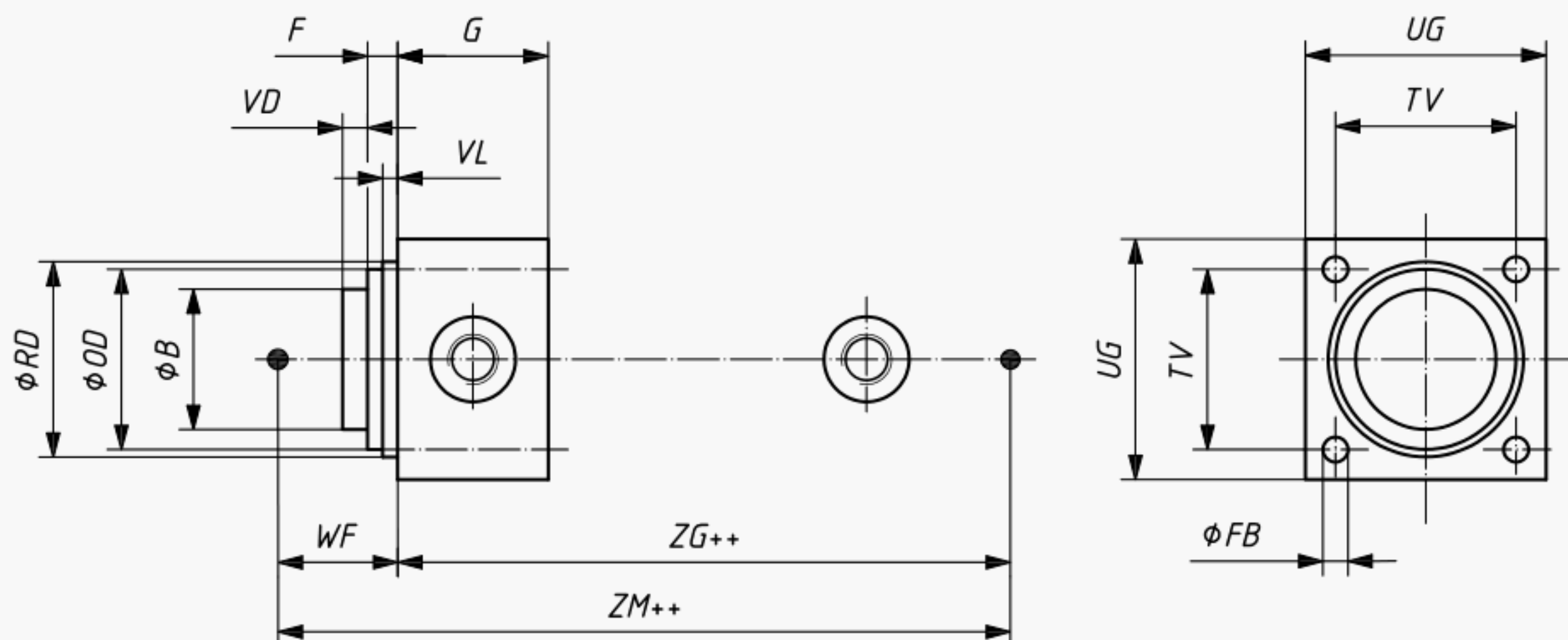


Figure 20 — MDE 9: Head, square — Double rod

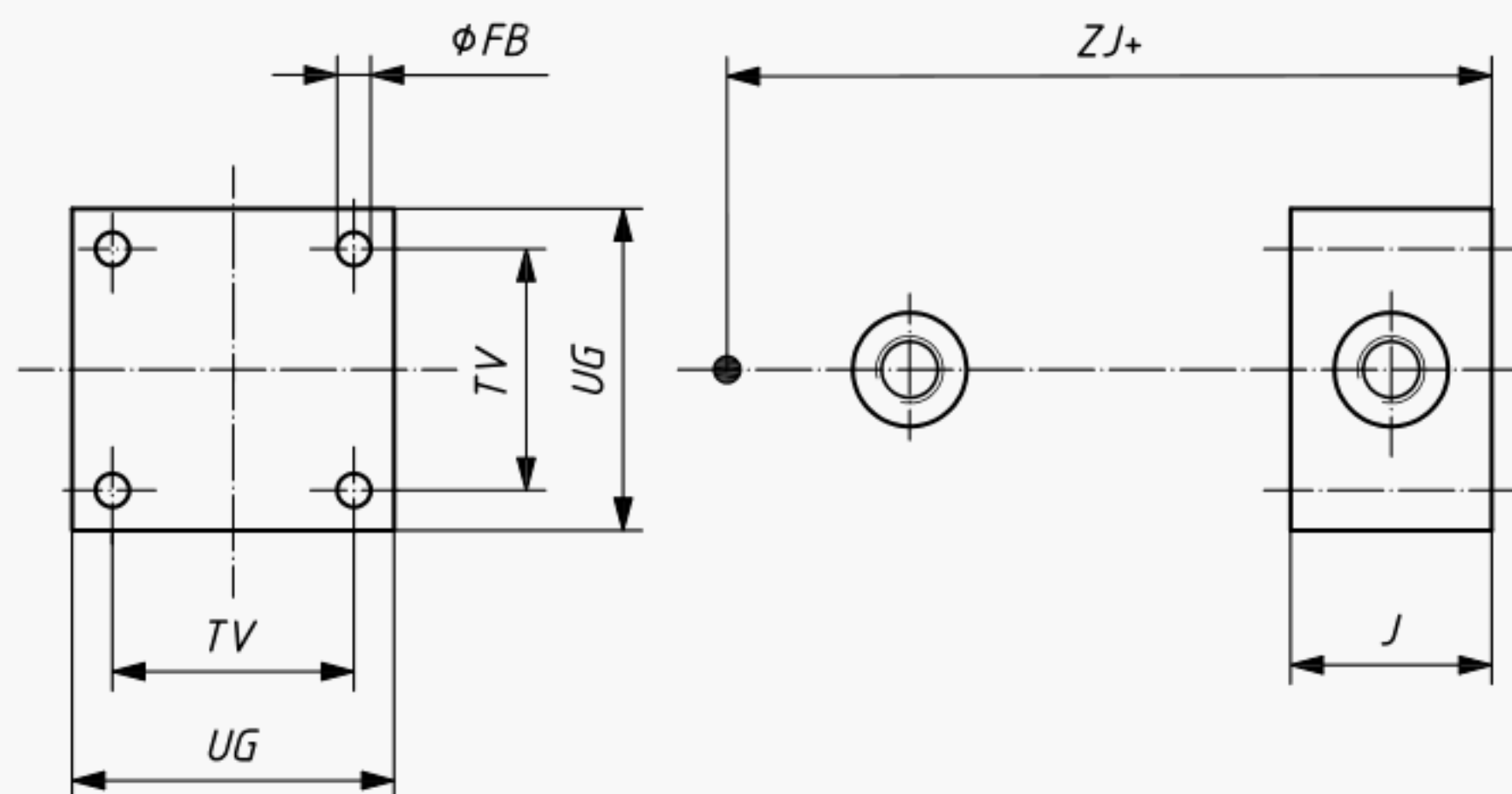


Figure 21 — ME 10: Cap, square

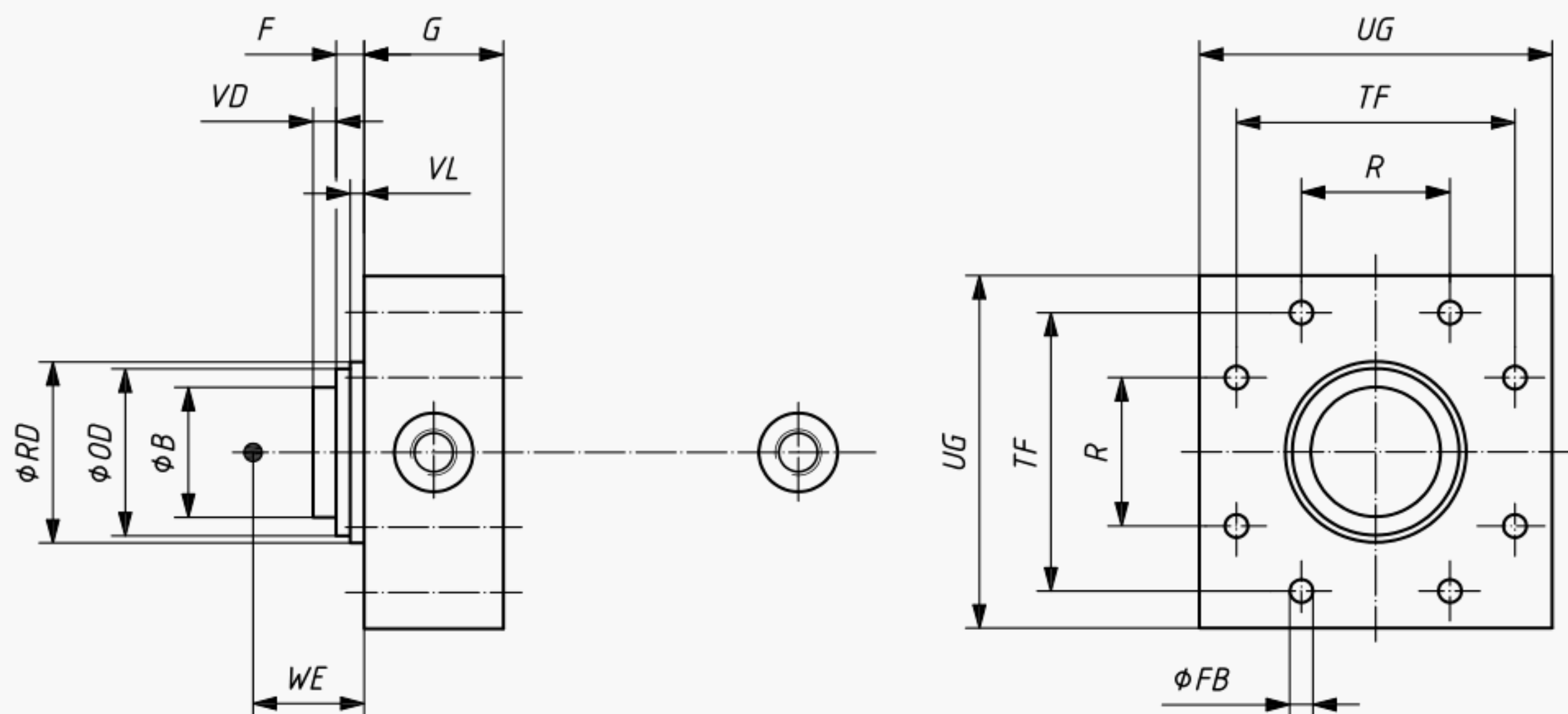


Figure 22 — ME 11: Head, square

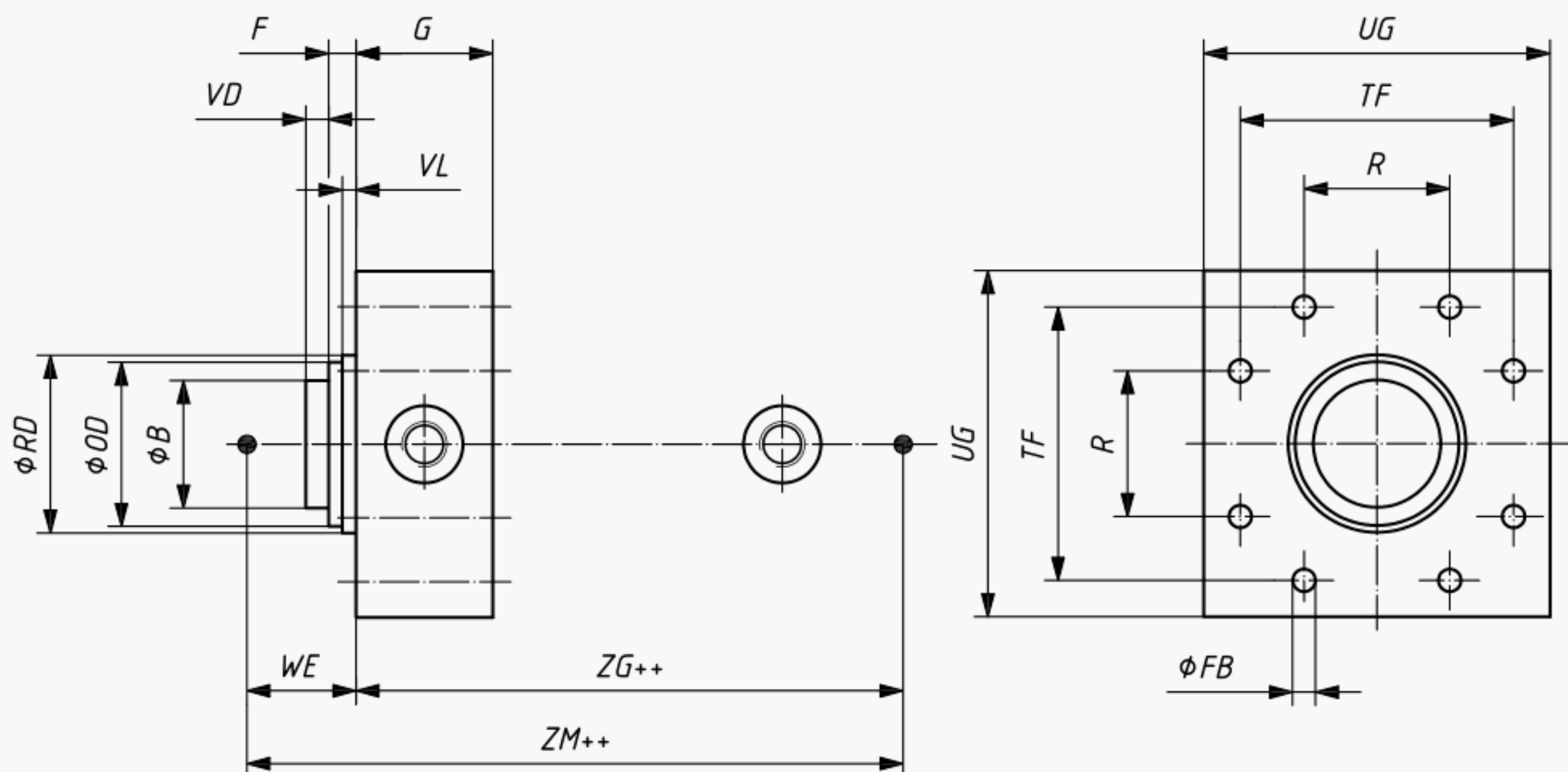


Figure 23 — MDE 11: Head, square — Double rod

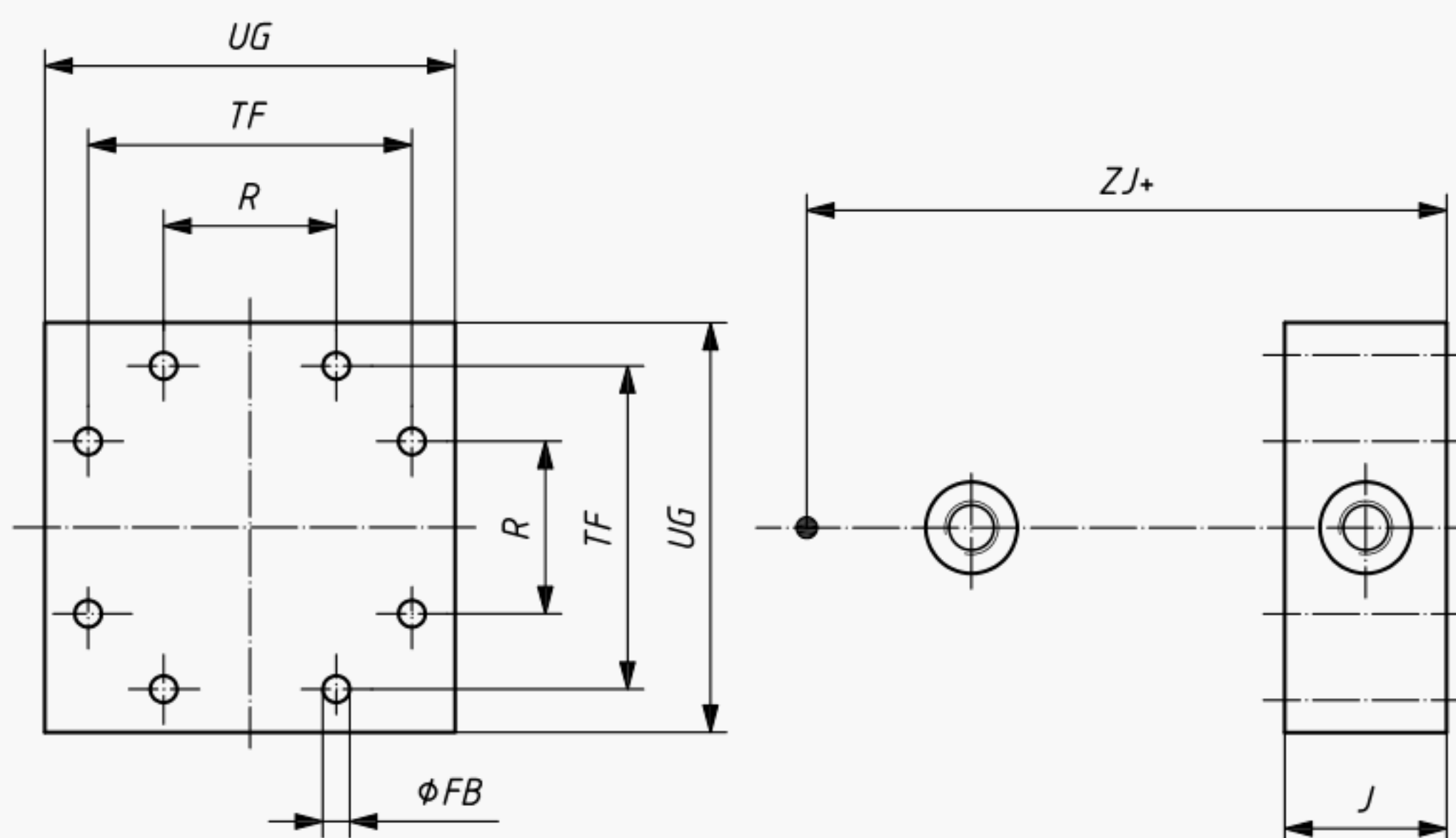


Figure 24 — ME 12: Cap, square

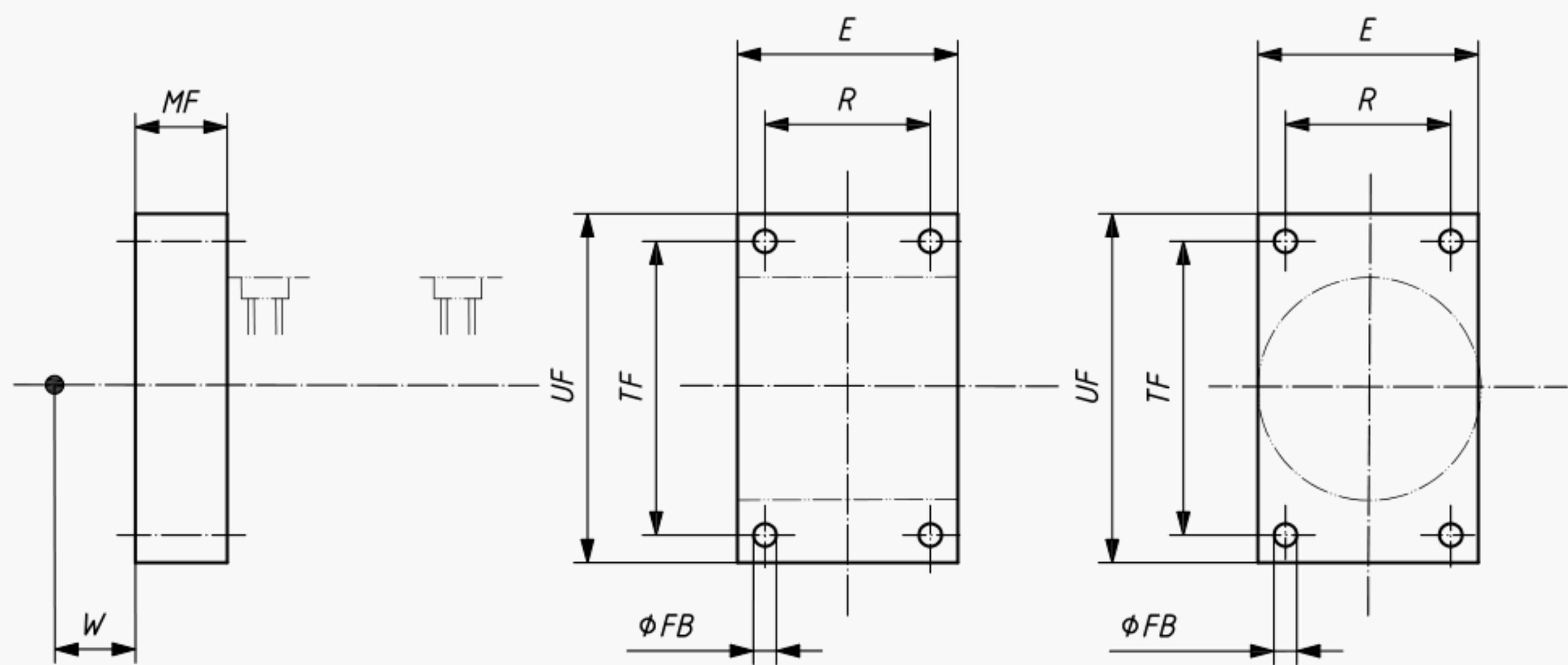


Figure 25 — MF 1: Head, rectangular flange

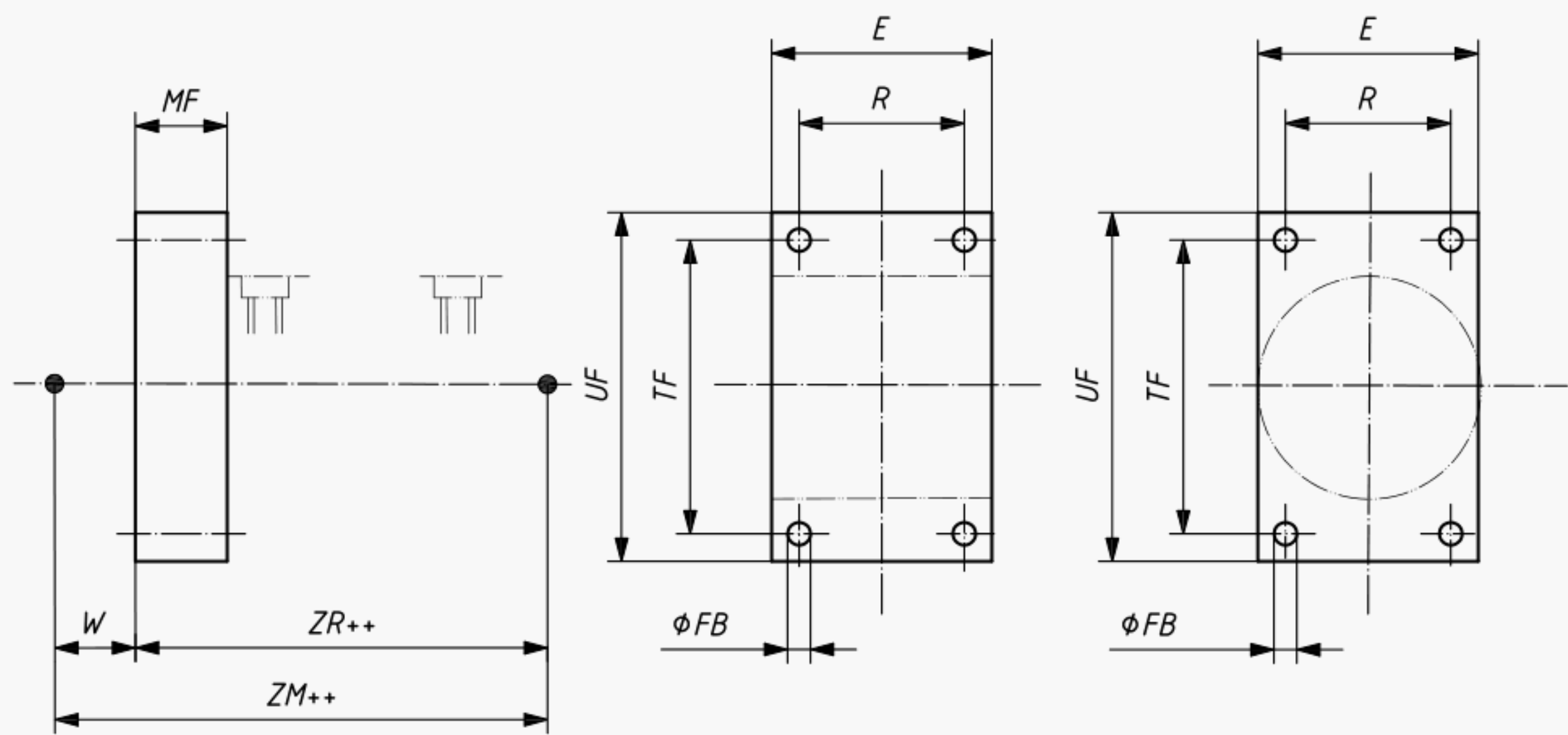


Figure 26 — MDF 1: Head, rectangular flange — Double rod

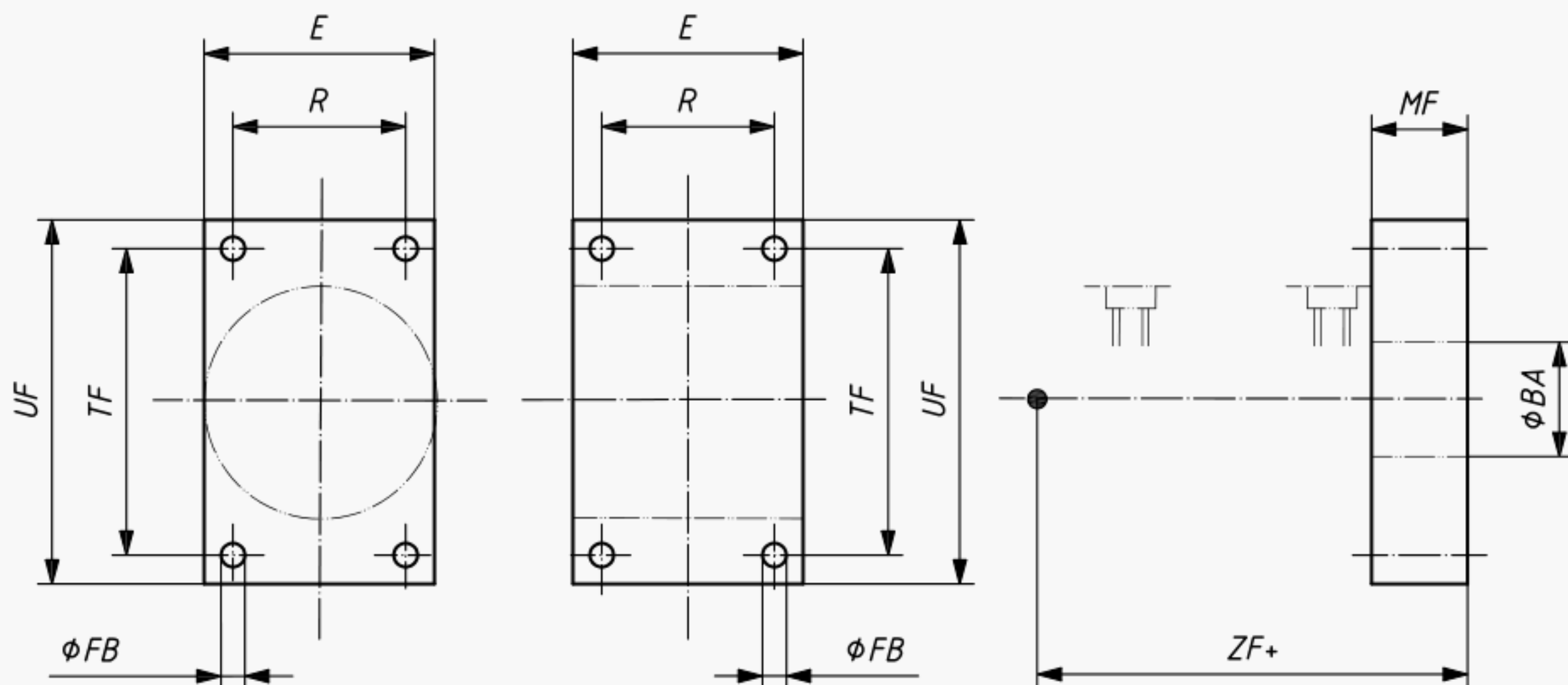


Figure 27 — MF 2: Cap, rectangular flange

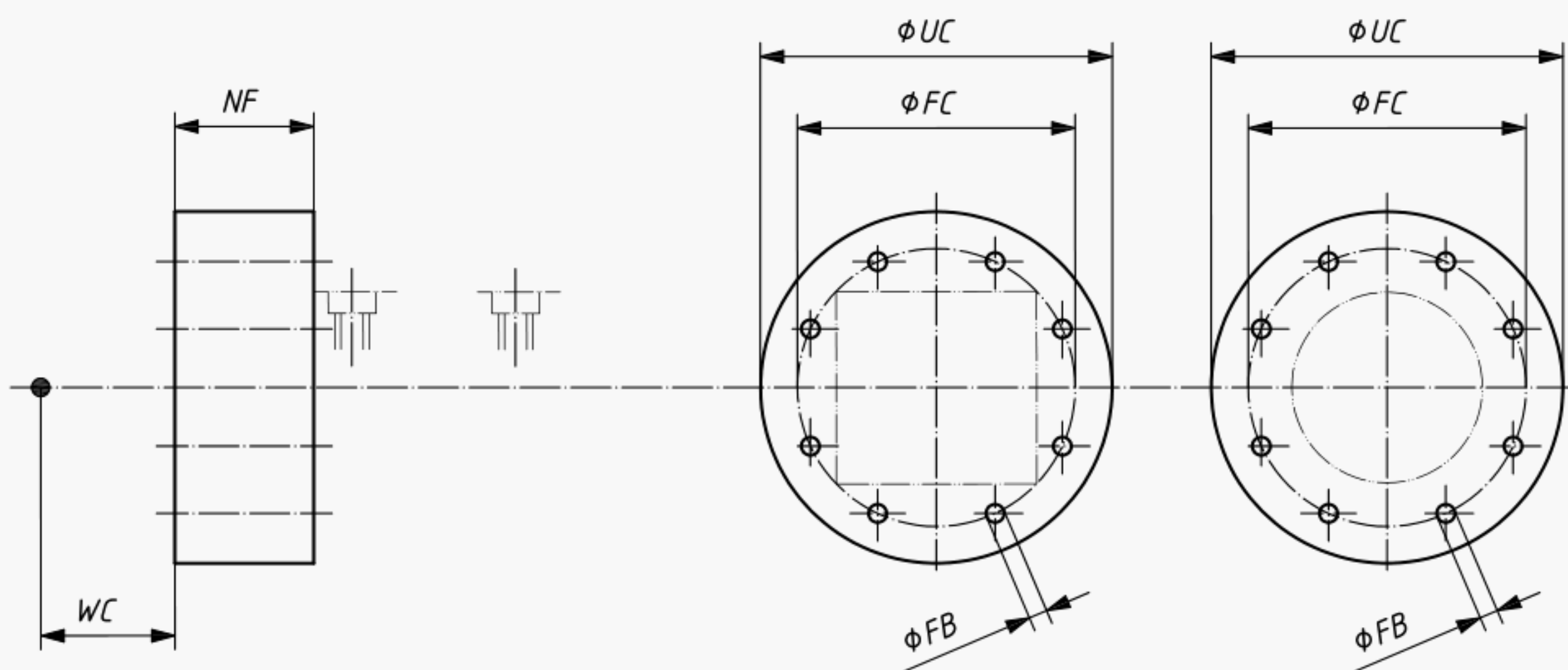


Figure 28 — MF 3: Head, circular flange

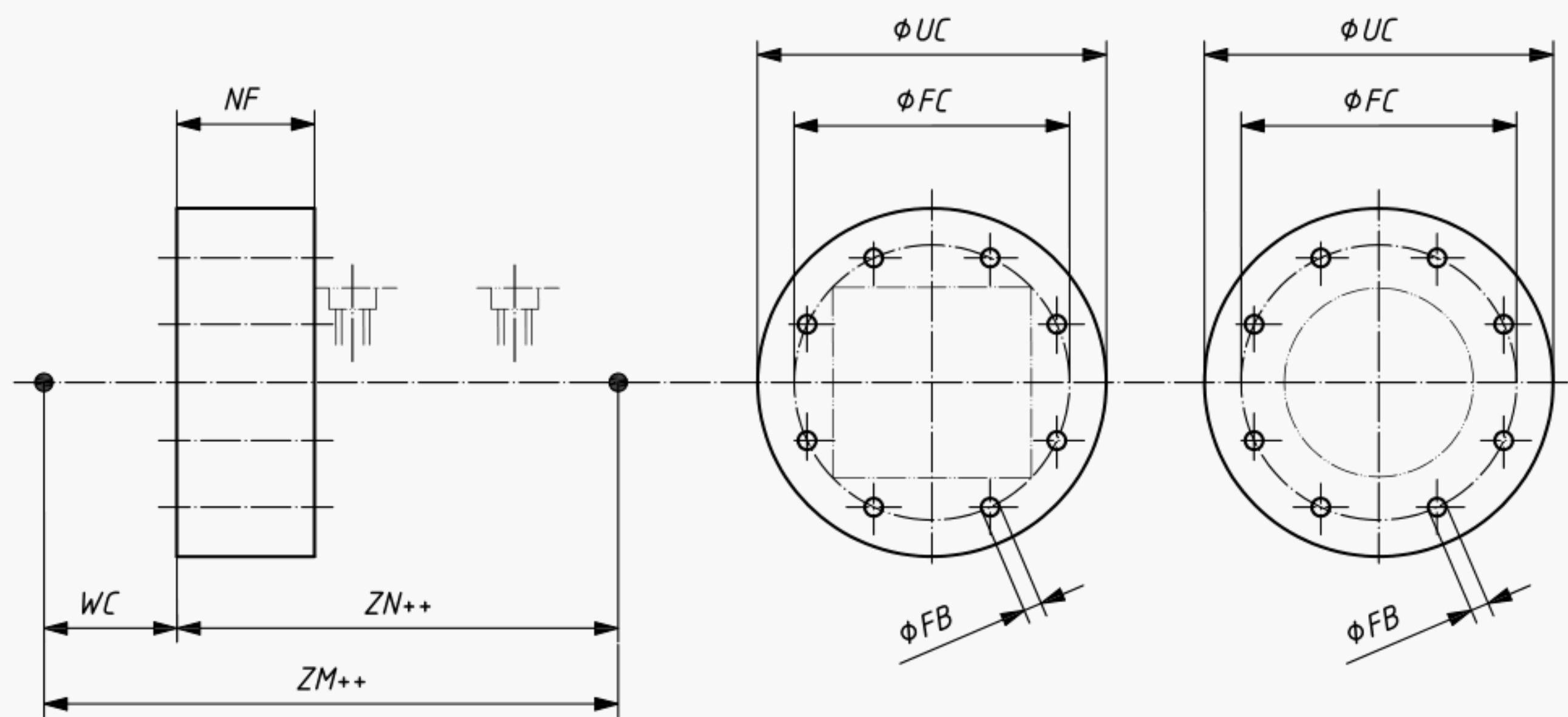


Figure 29 — MDF 3: Head, circular flange — Double rod

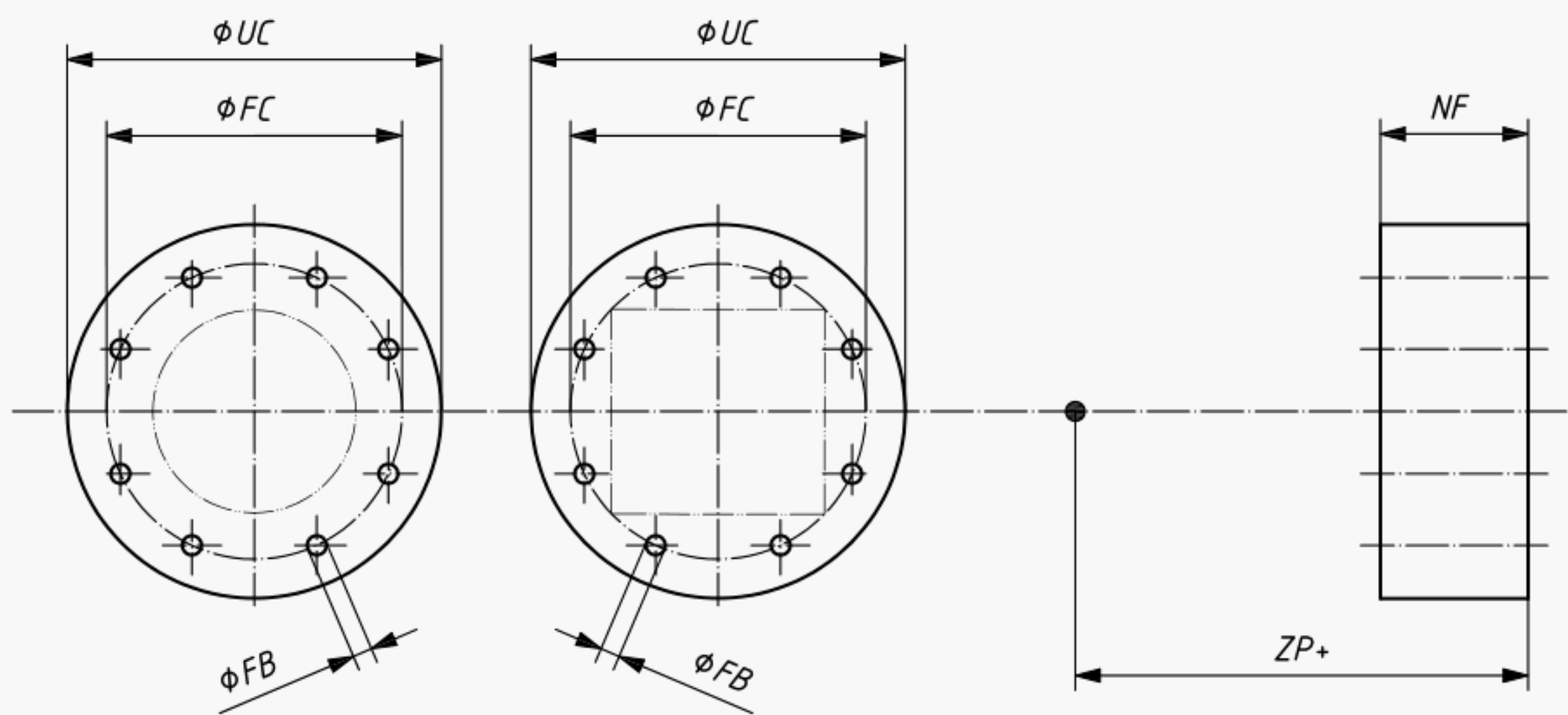


Figure 30 — MF 4: Cap, circular flange

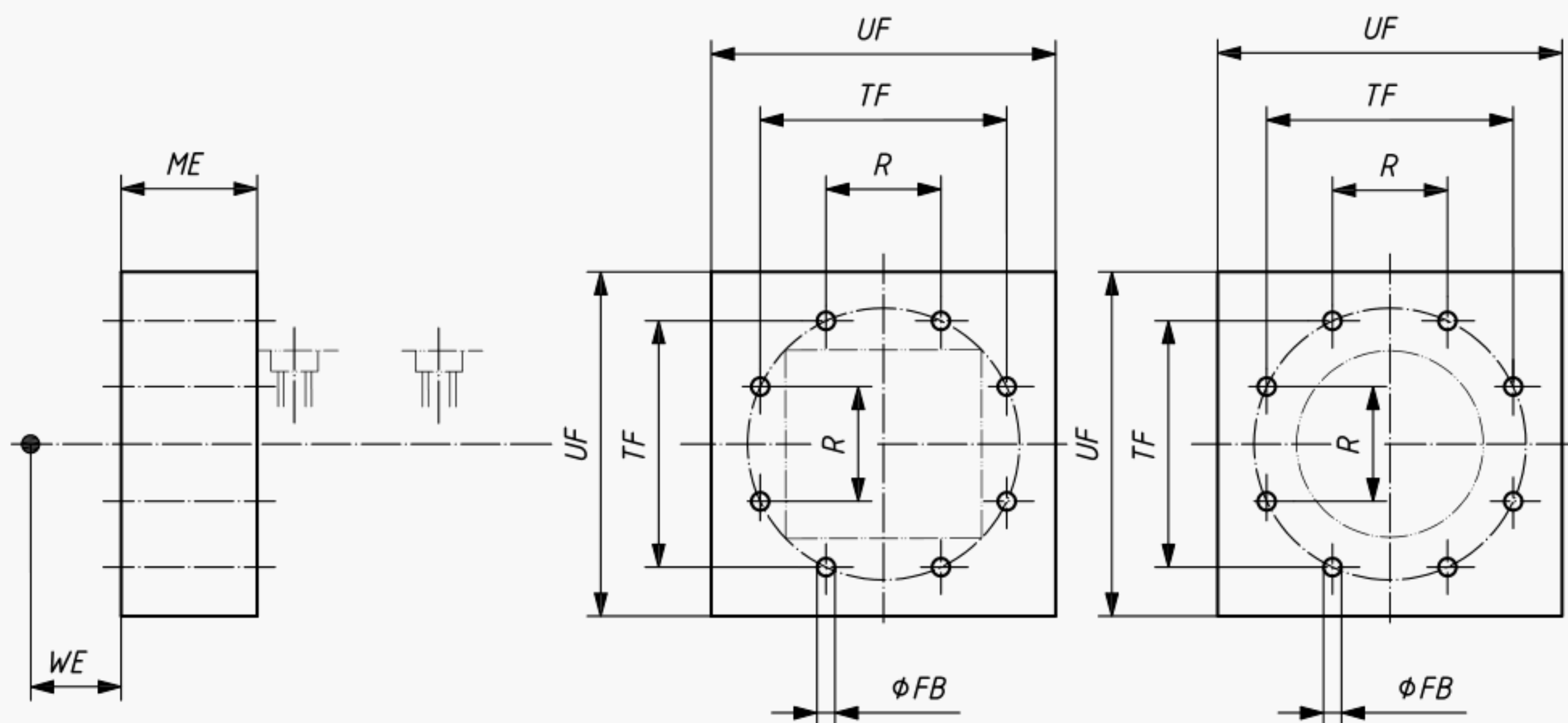


Figure 31 — MF 5: Head, square flange

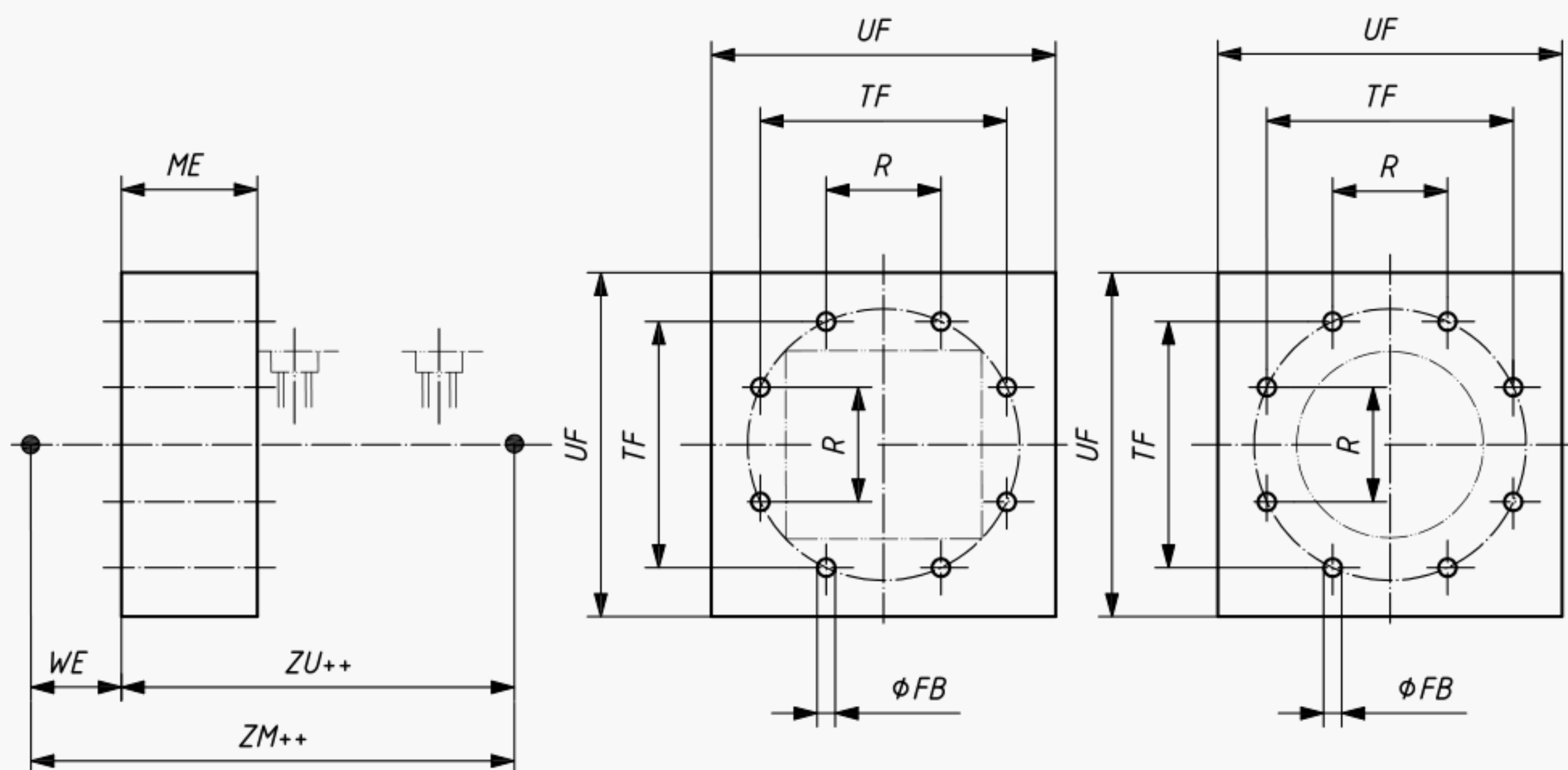


Figure 32 — MDF 5: Head, square flange — Double rod

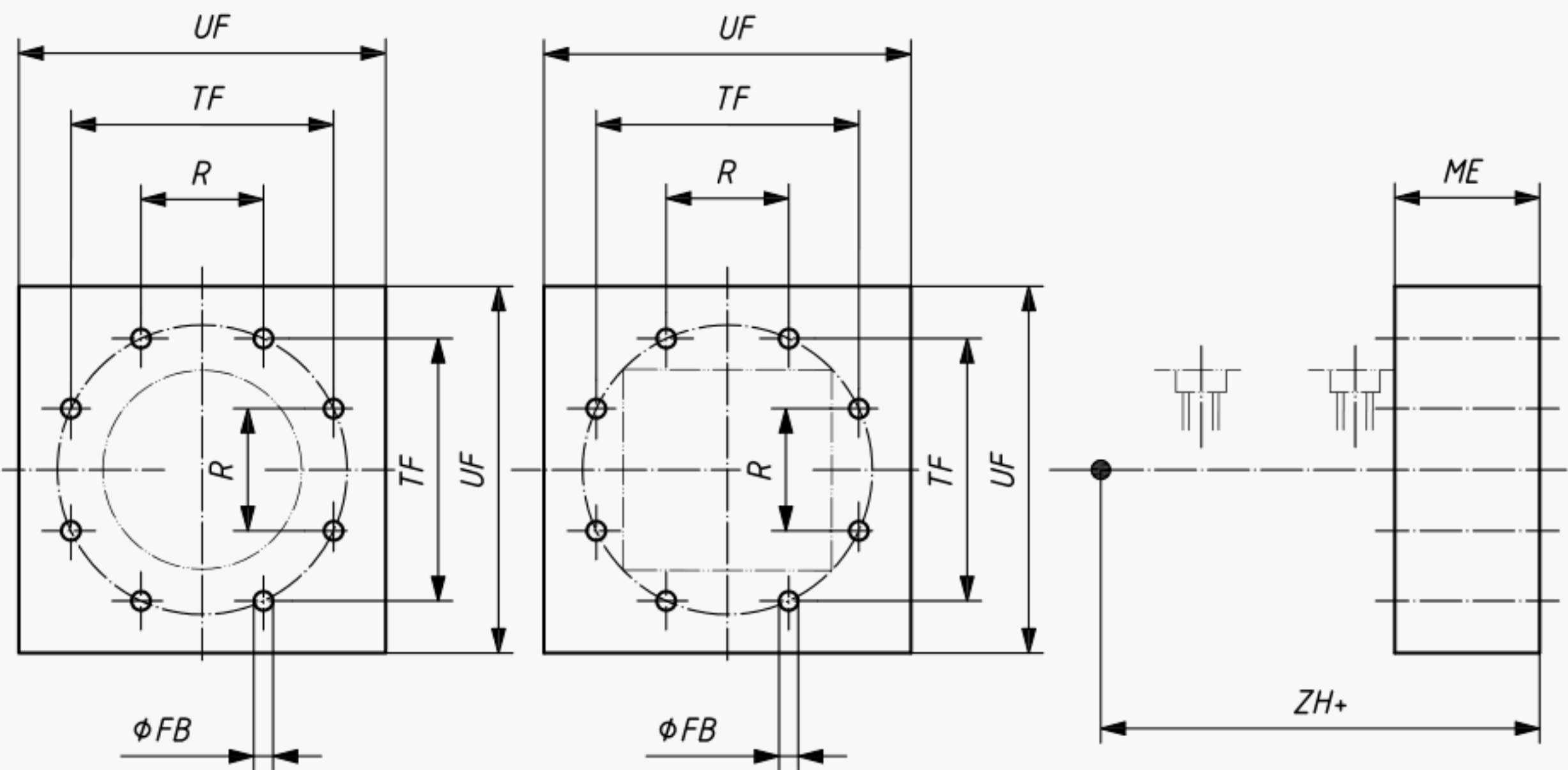


Figure 33 — MF 6: Cap, square flange

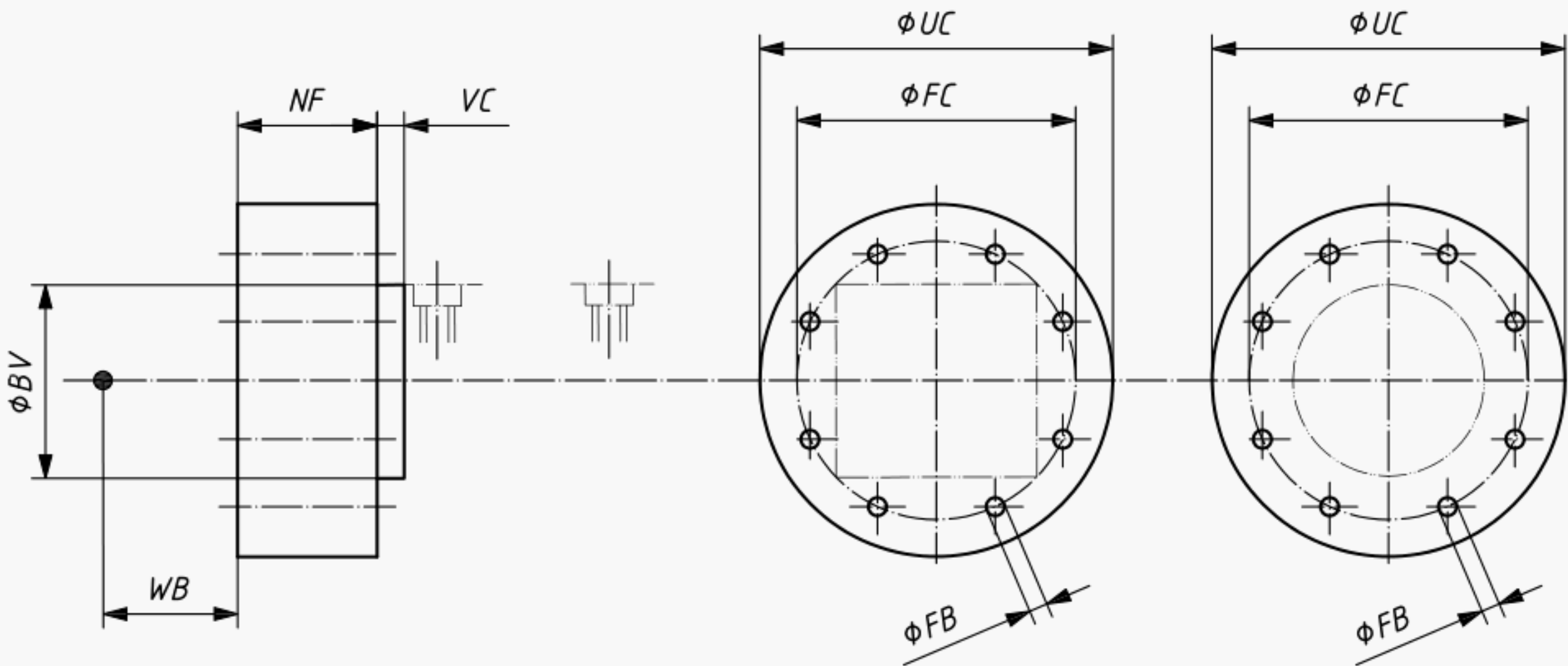


Figure 34 — MF 7: Head, circular flange centred on the rear side

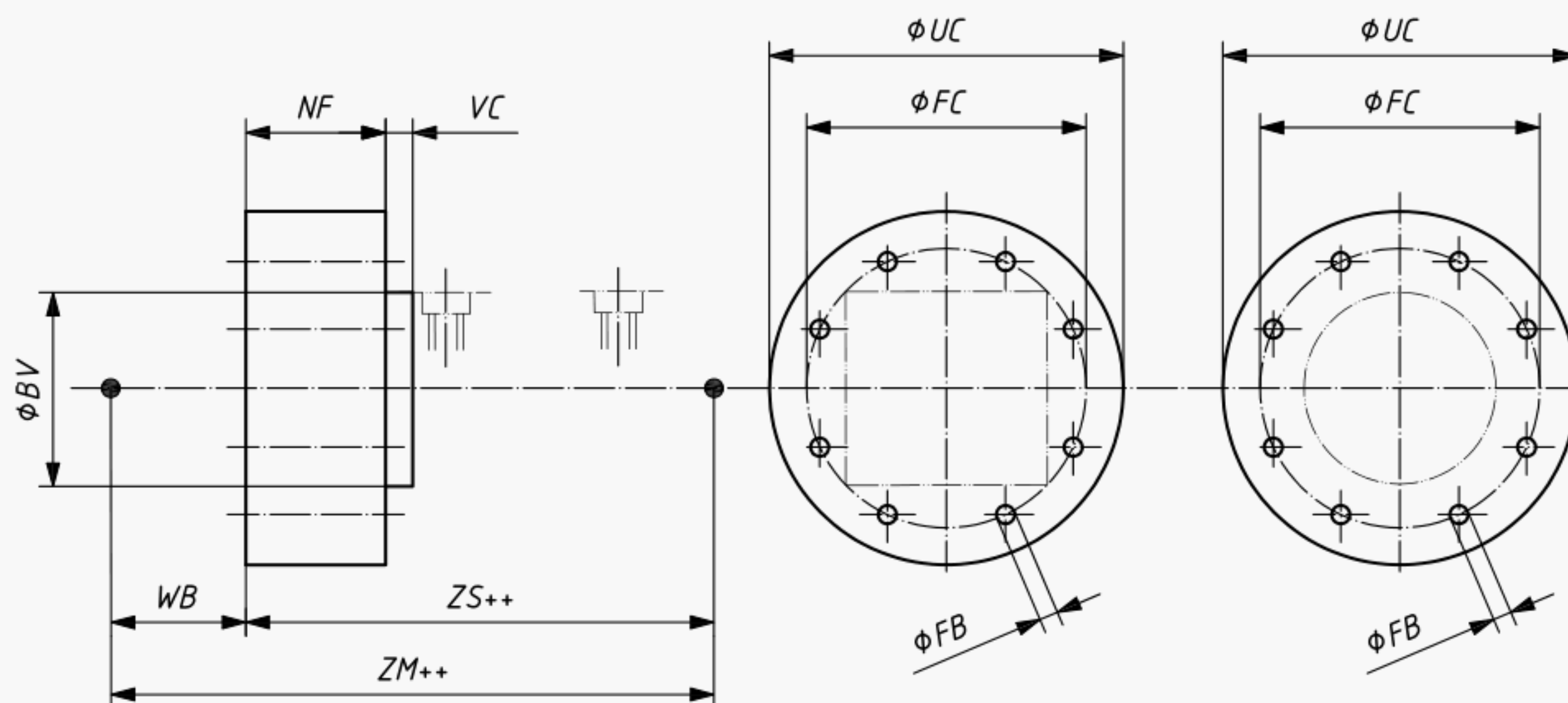


Figure 35 — MDF 7: Head, circular flange centred on the rear side — Double rod

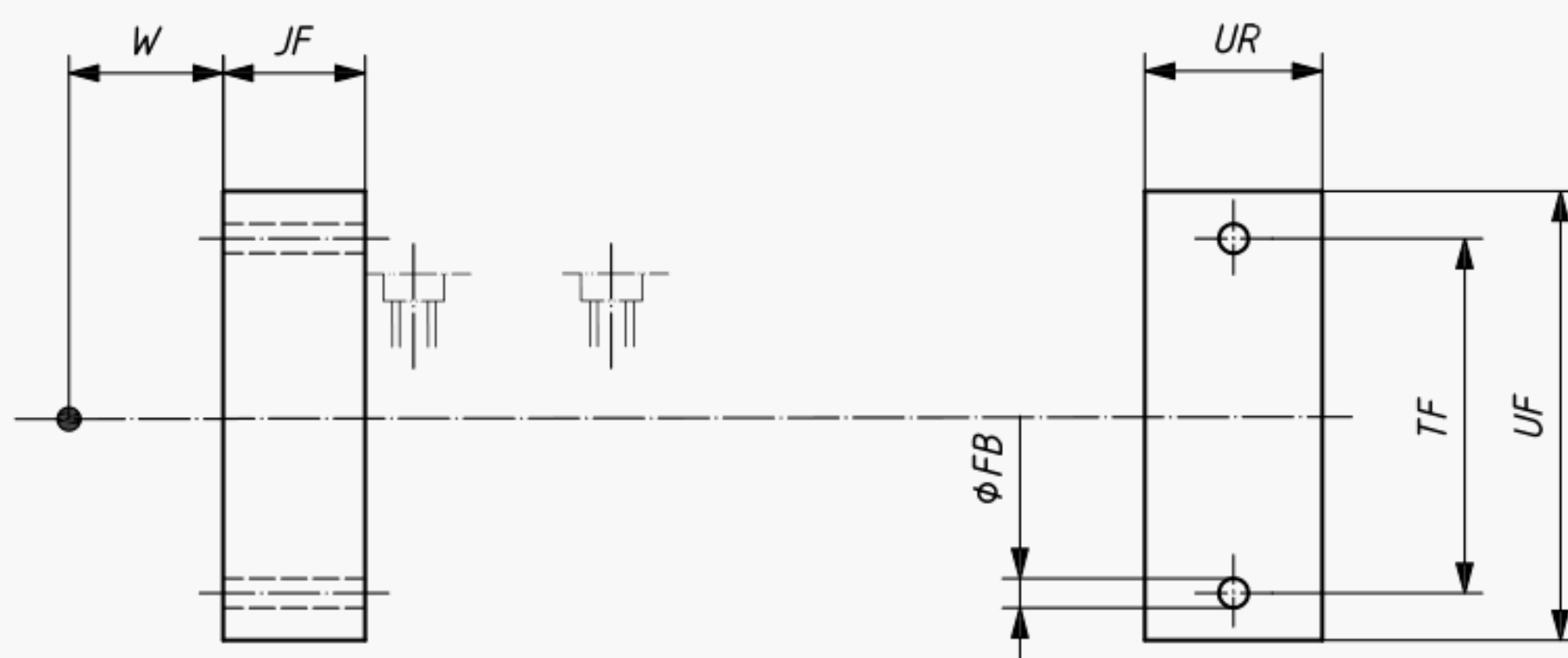


Figure 36 — MF 8: Head, rectangular flange with two holes

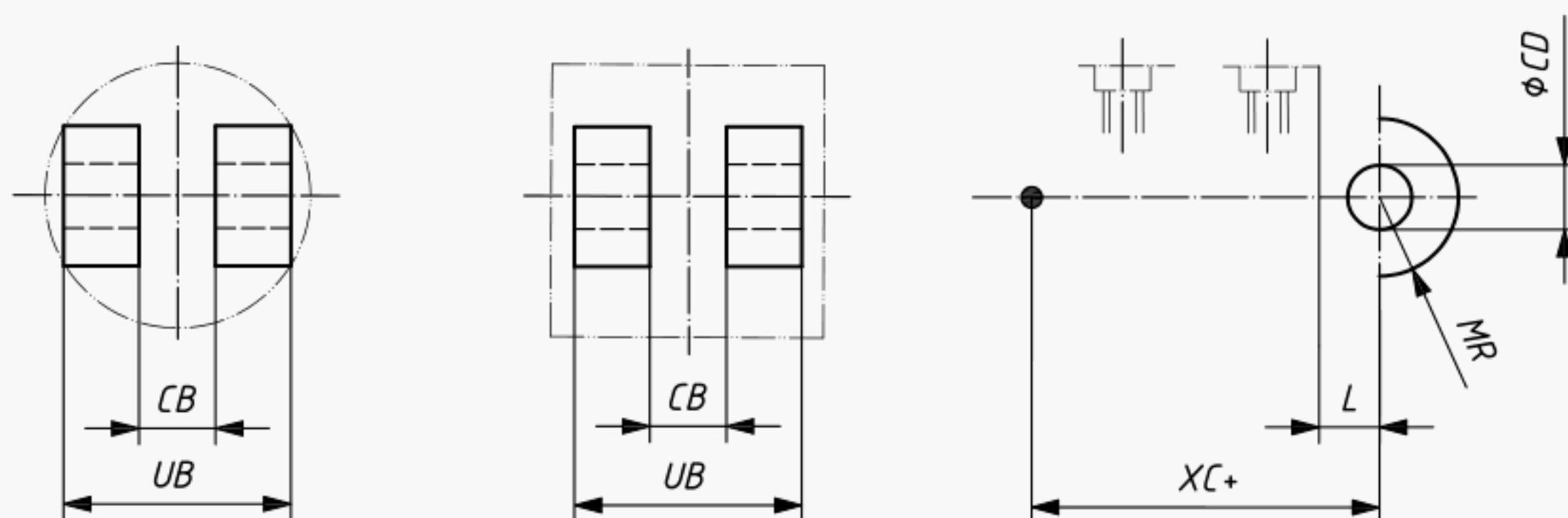


Figure 37 — MP 1: Cap, fixed clevis

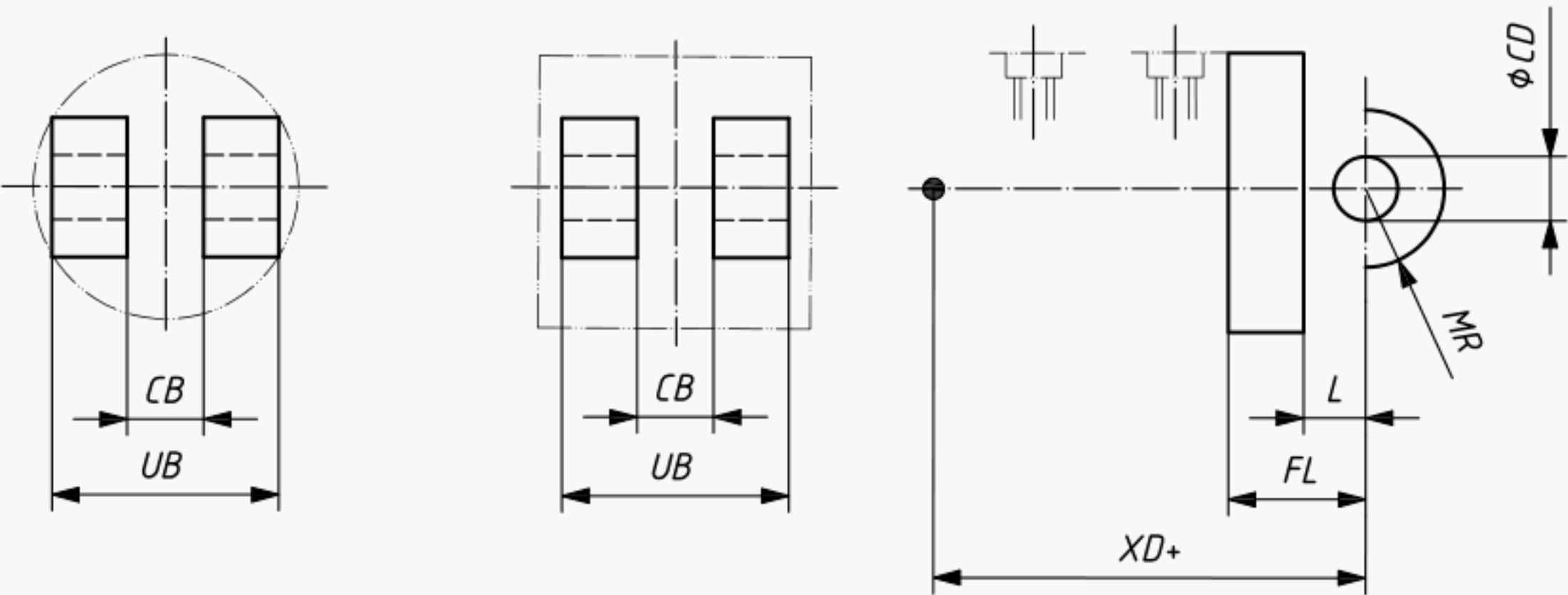


Figure 38 — MP 2: Cap, detachable clevis

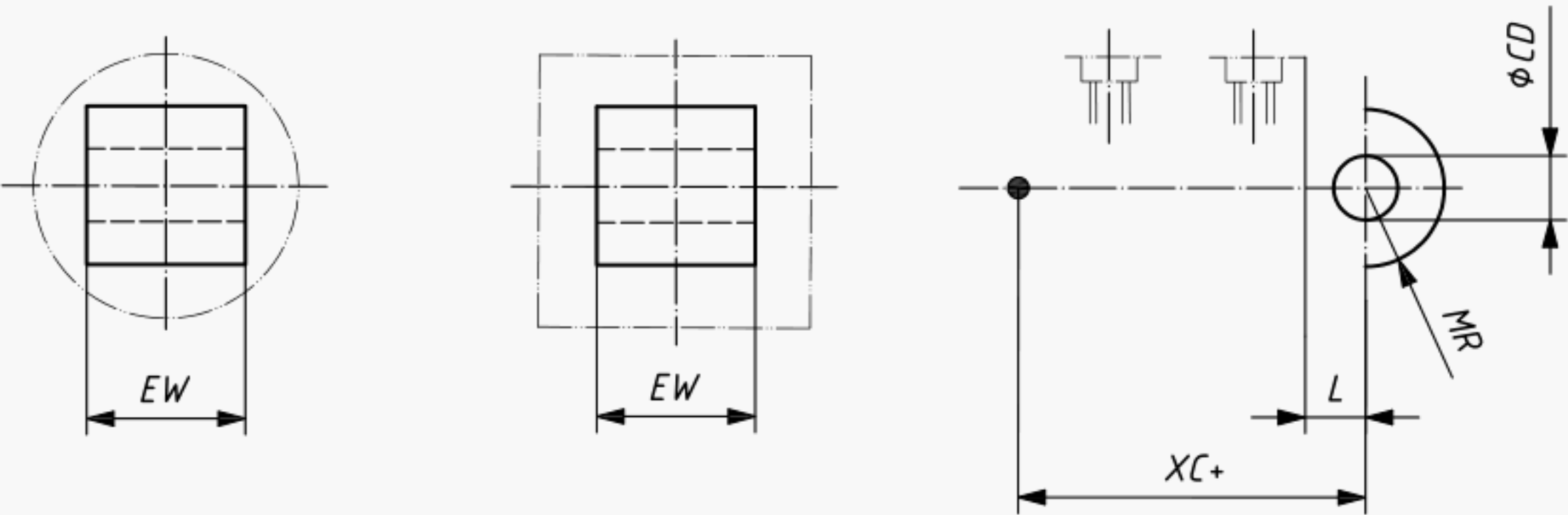


Figure 39 — MP 3: Cap, fixed plain eye

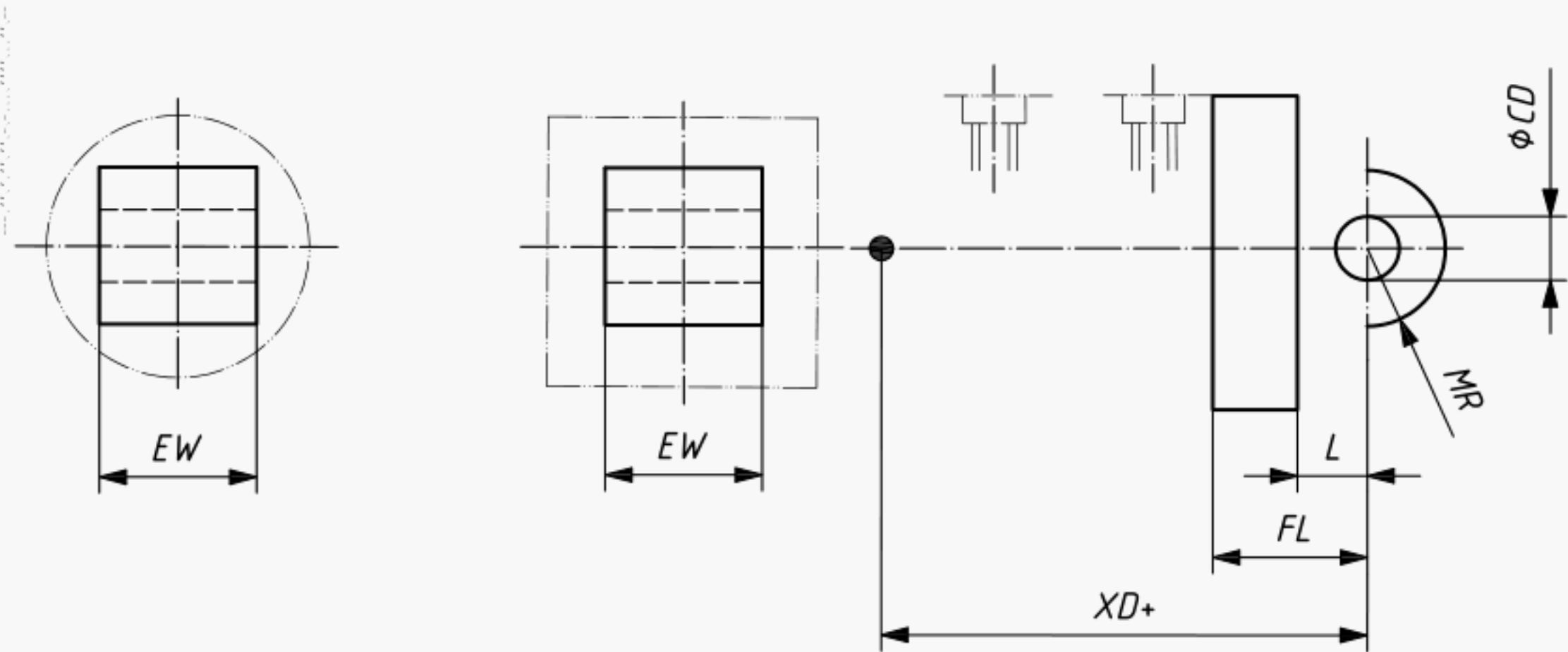


Figure 40 — MP 4: Cap, detachable plain eye

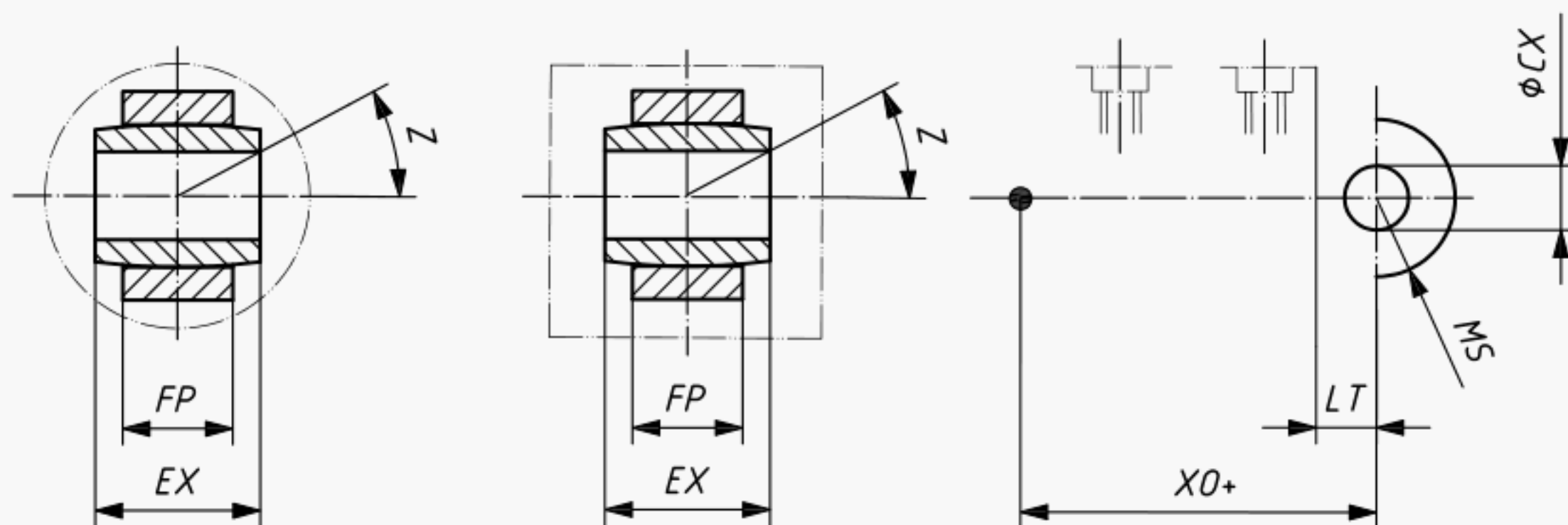


Figure 41 — MP 5: Cap, fixed eye with spherical bearing

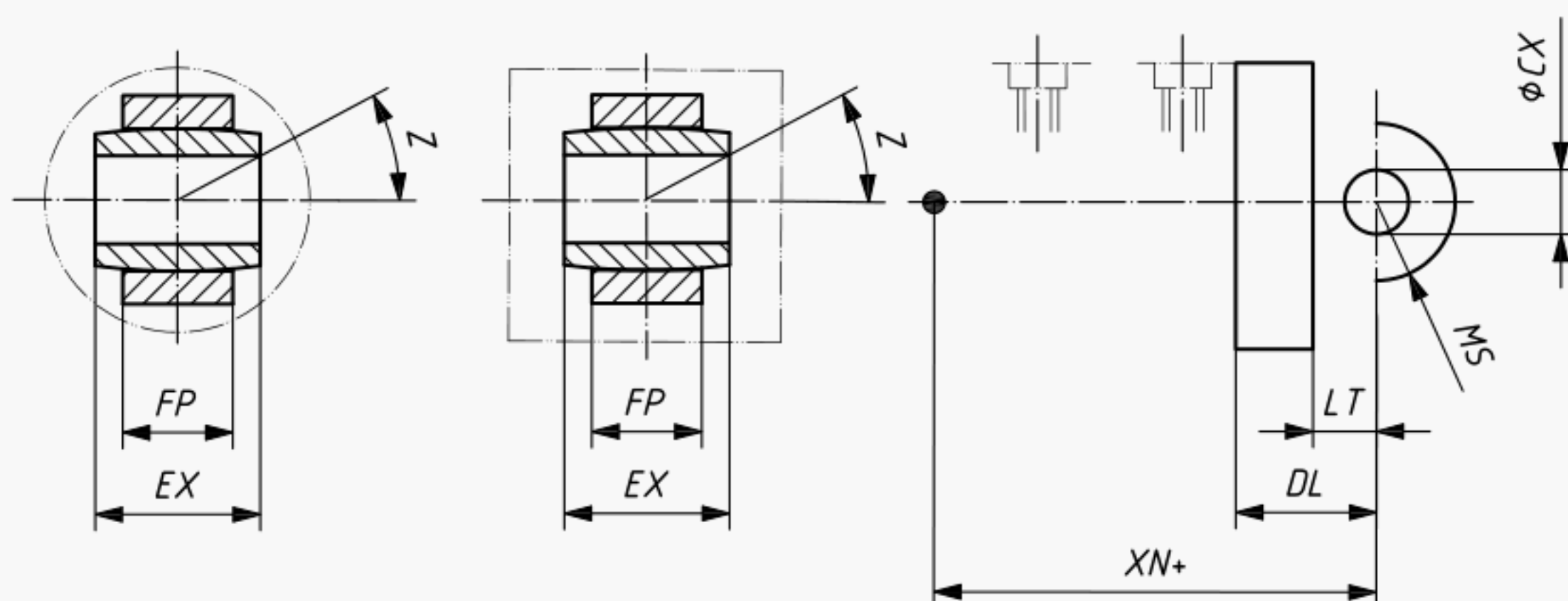


Figure 42 — MP 6: Cap, detachable eye with spherical bearing

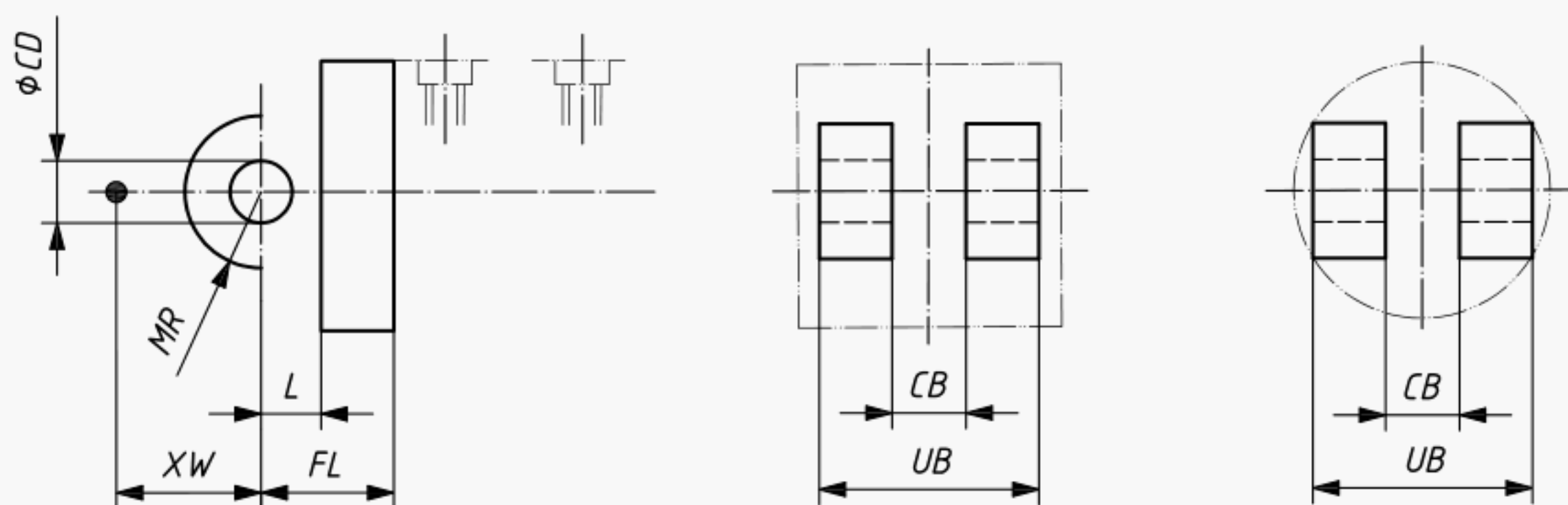


Figure 43 — MP 7: Head, detachable clevis

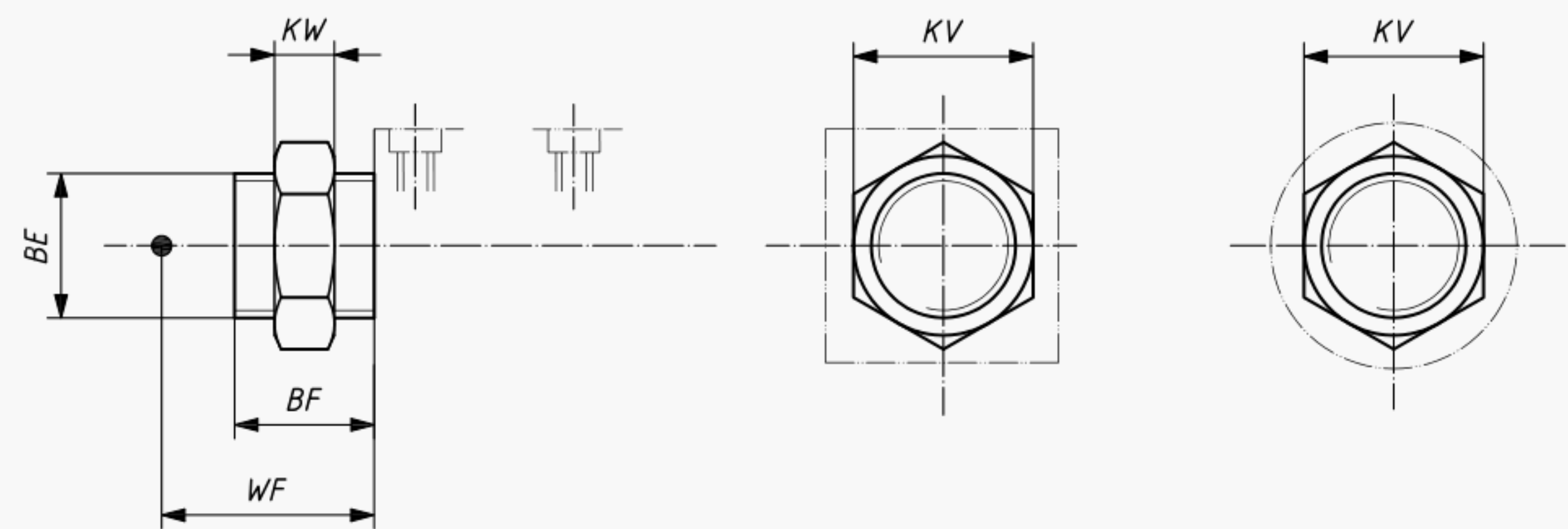


Figure 44 — MR 3: Head, threaded

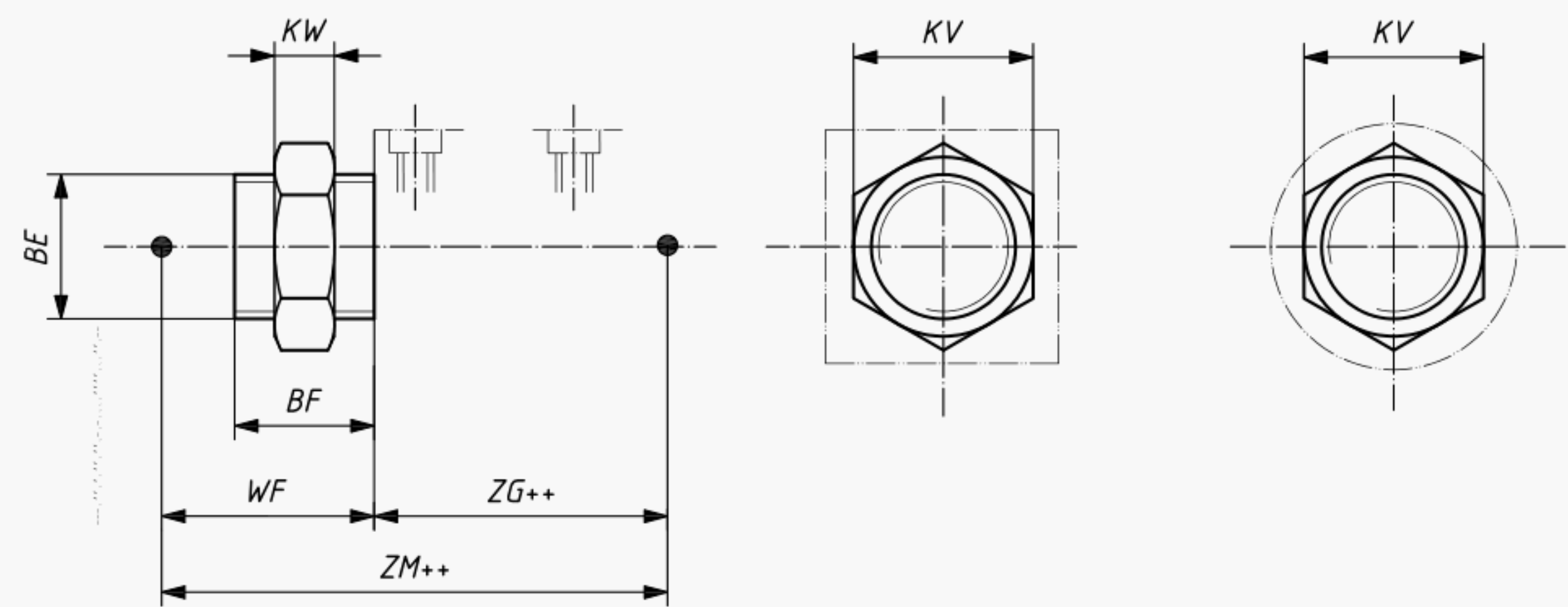


Figure 45 — MDR 3: Head, threaded — Double rod

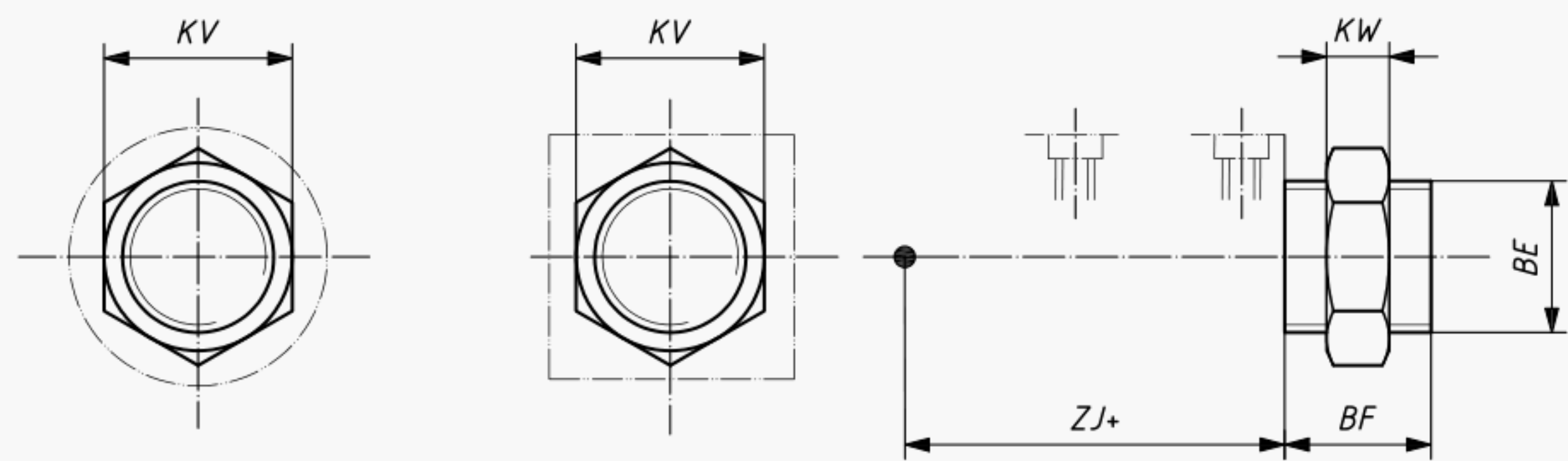


Figure 46 — MR 4: Cap, threaded

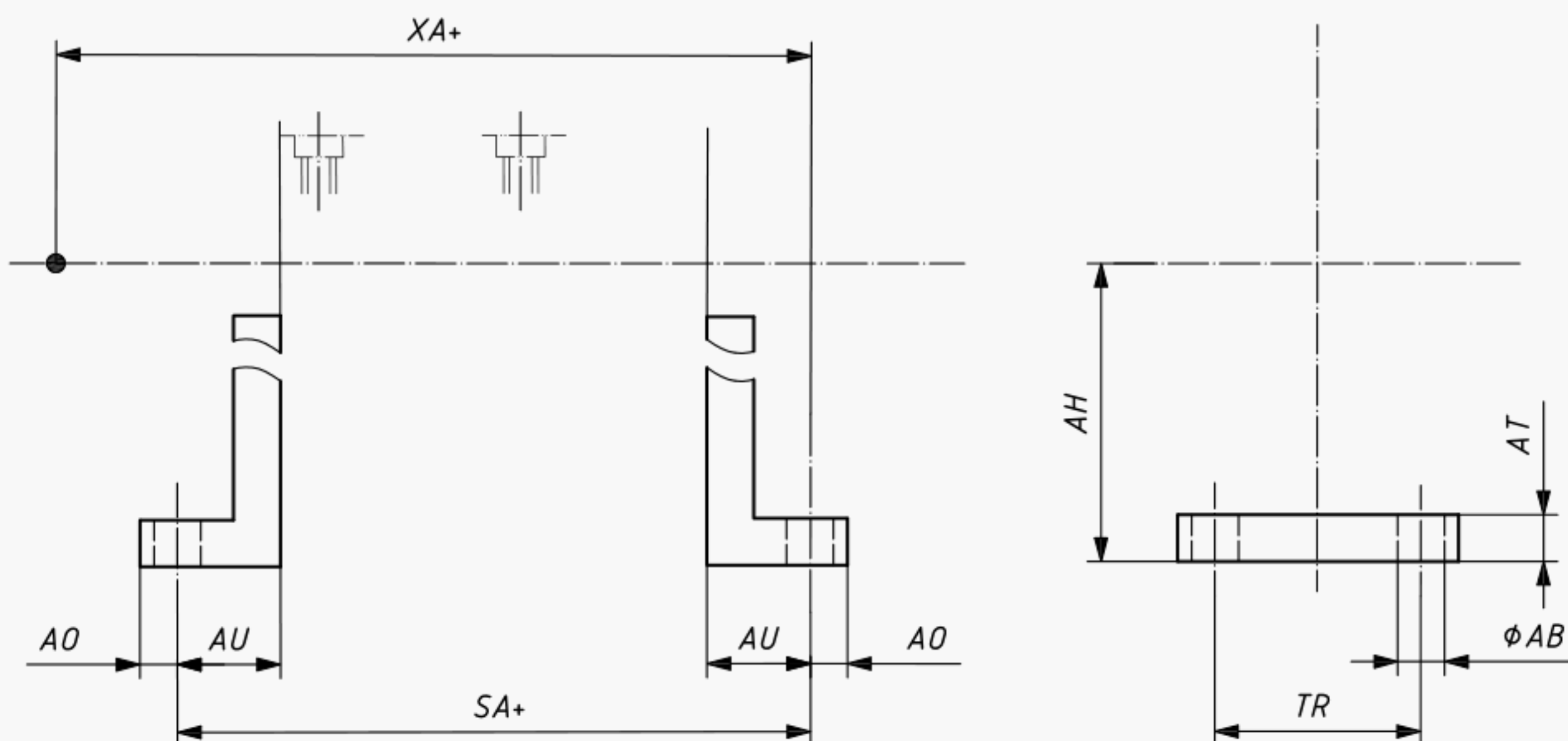


Figure 47 — MS 1: End angles

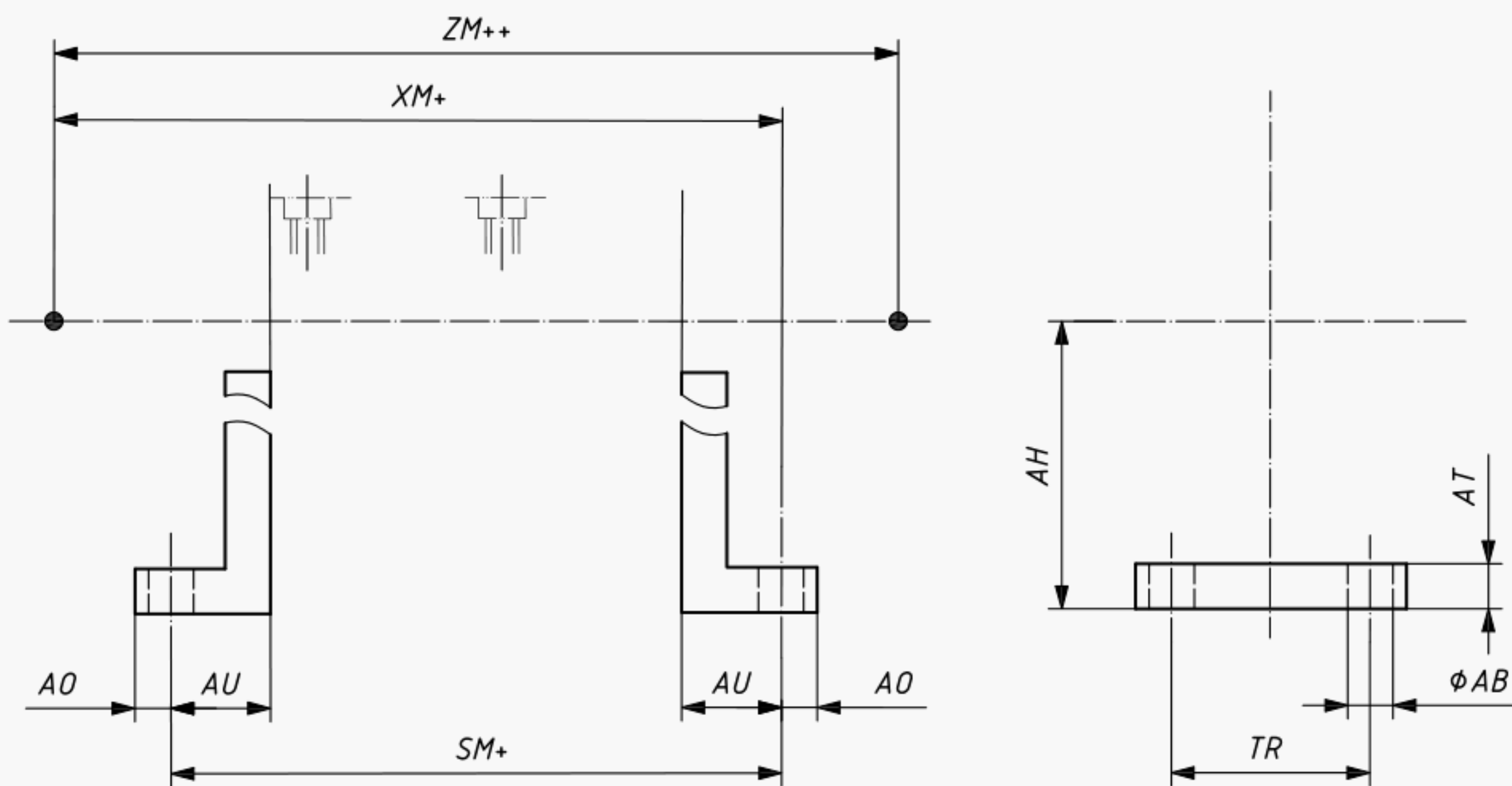


Figure 48 — MDS 1: End angles — Double rod

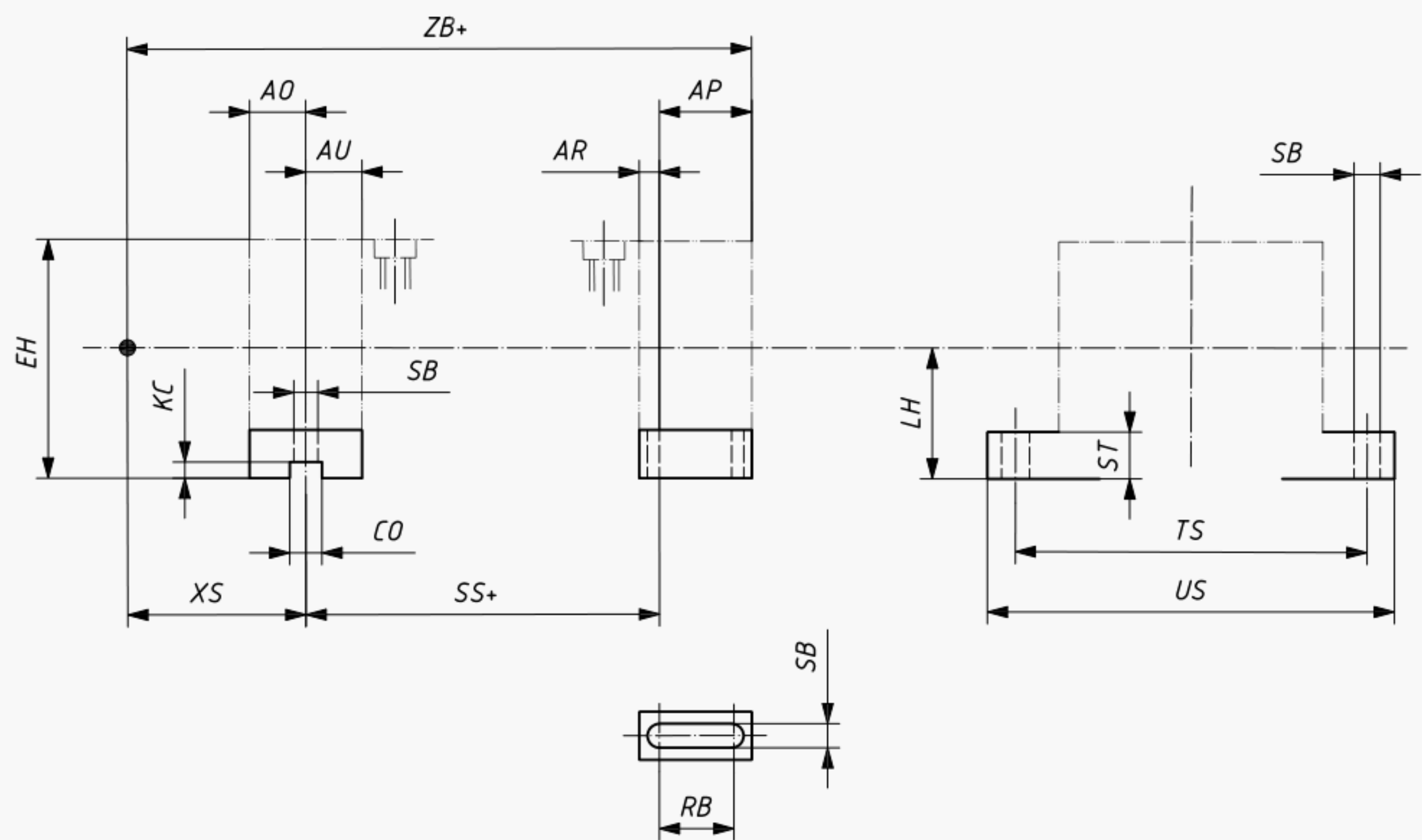


Figure 49 — MS 2: Side lugs

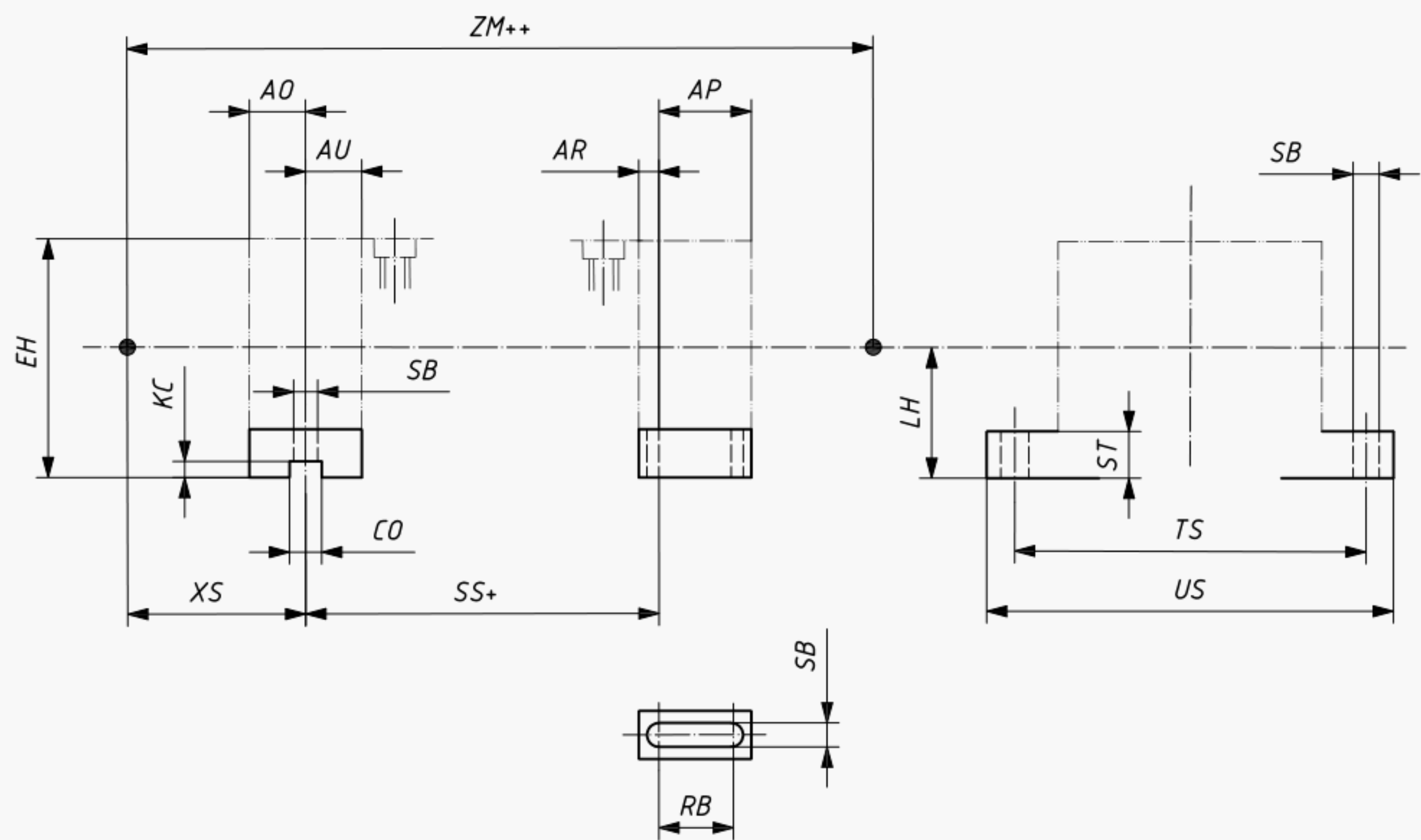


Figure 50 — MDS 2: Side lugs — Double rod

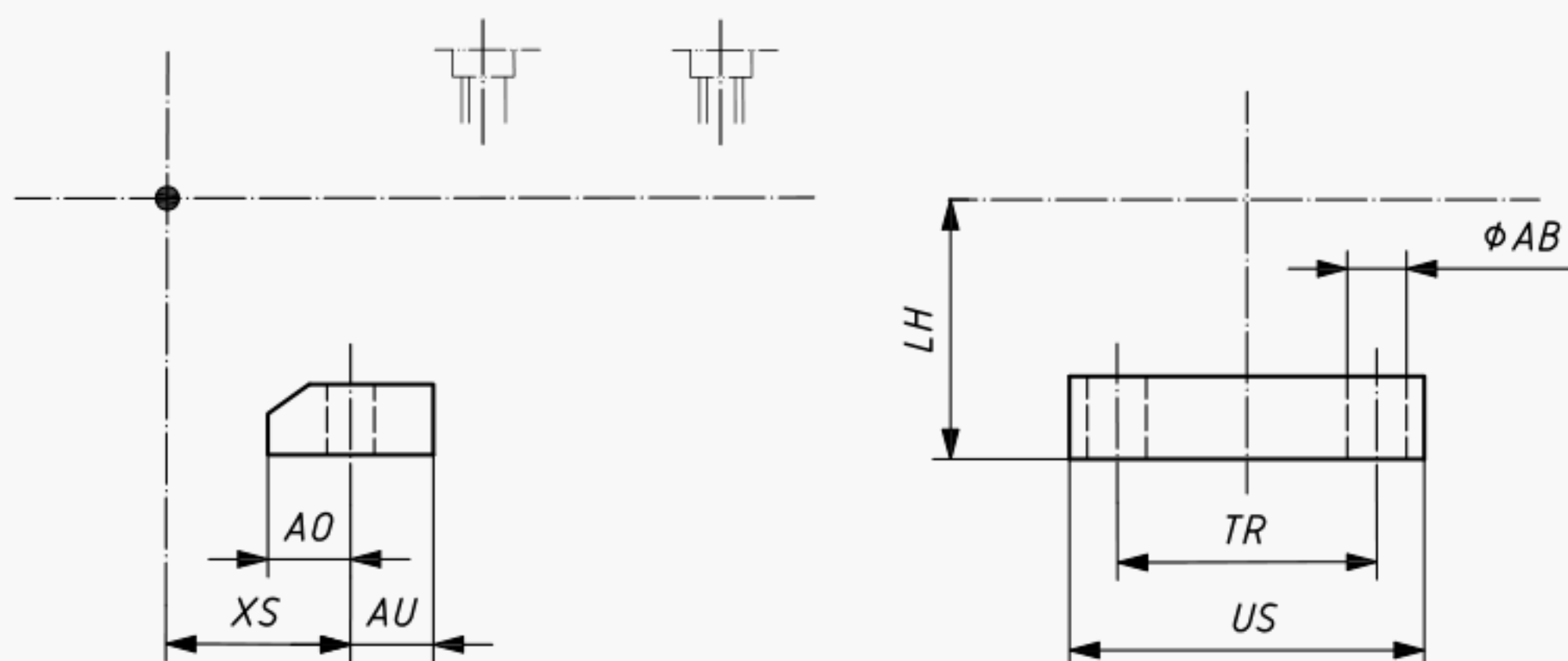


Figure 51 — MS 3: Head angle

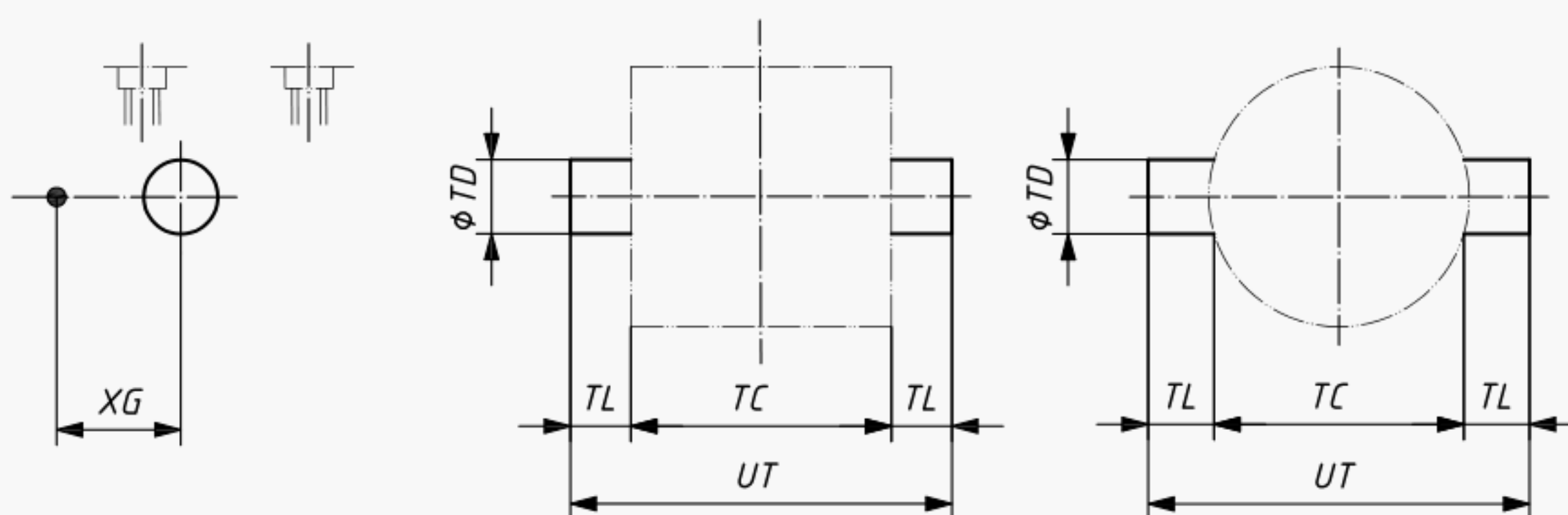


Figure 52 — MT 1: Head, integral trunnion (male)

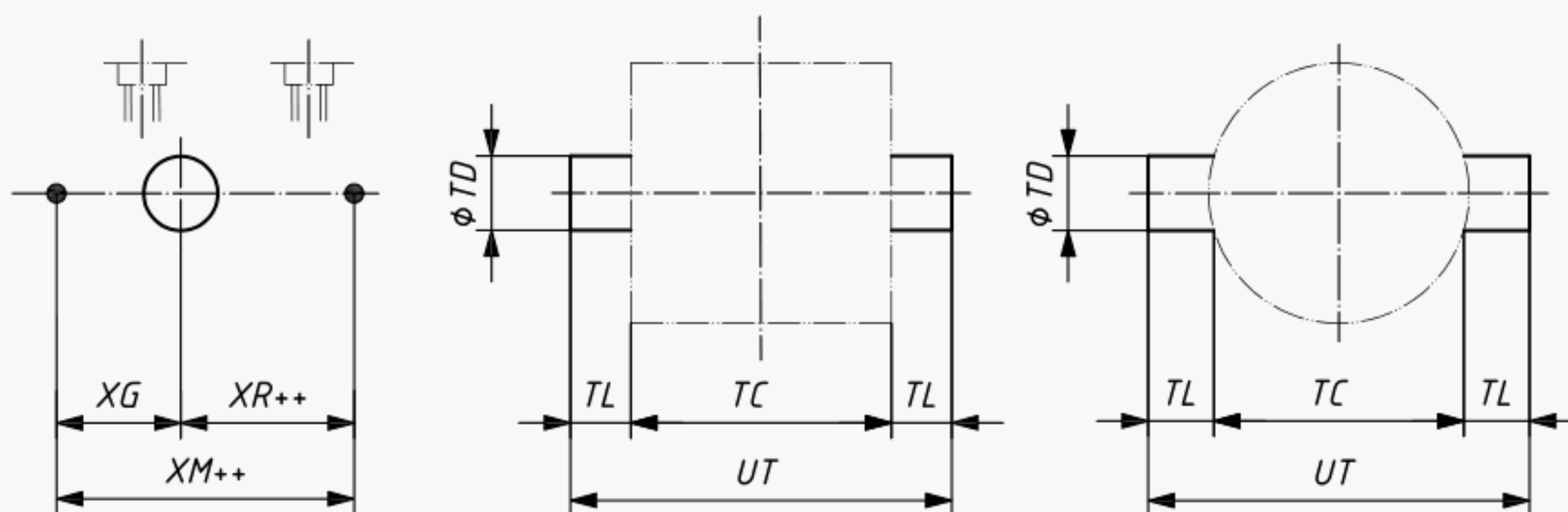


Figure 53 — MDT 1: Head, integral trunnion (male) — Double rod

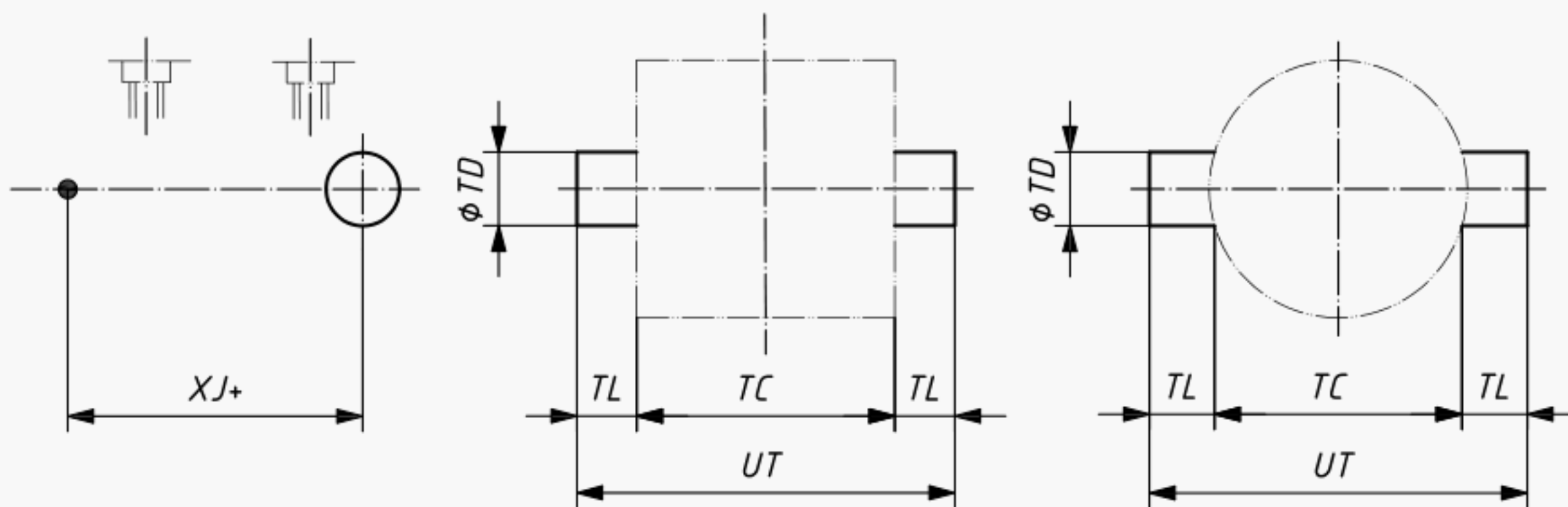


Figure 54 — MT 2: Cap, integral trunnion (male)

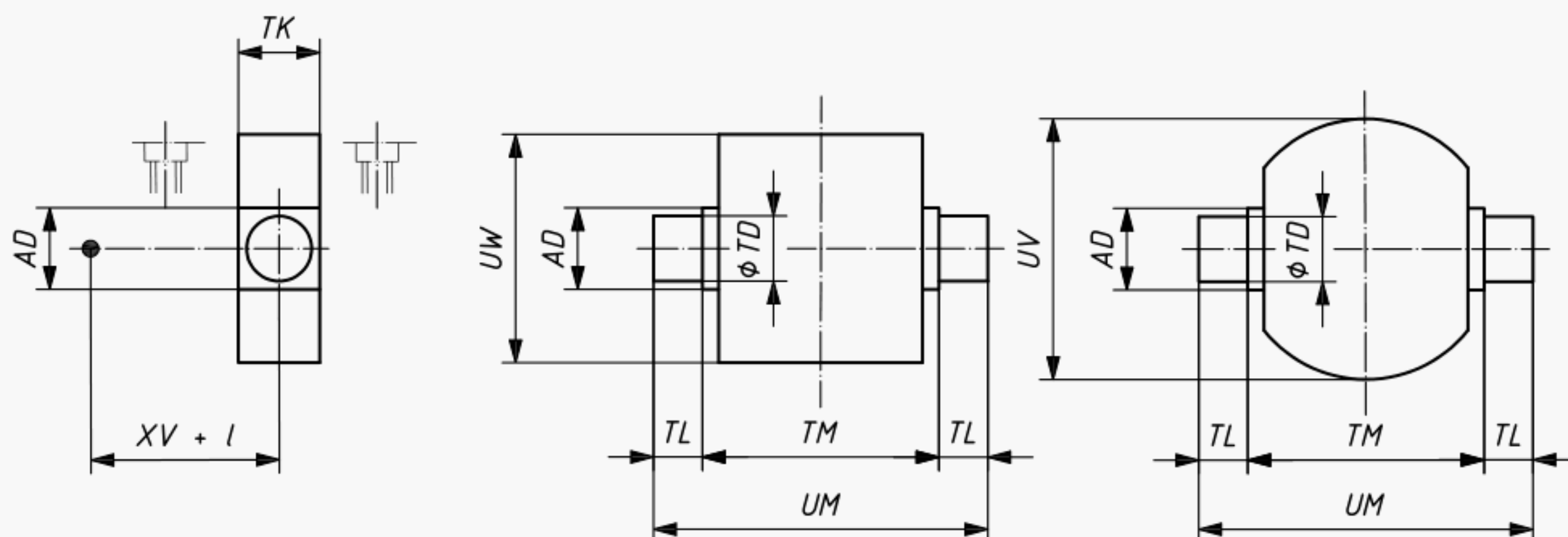


Figure 55 — MT 4: Intermediate trunnion (male) fixed or mobile

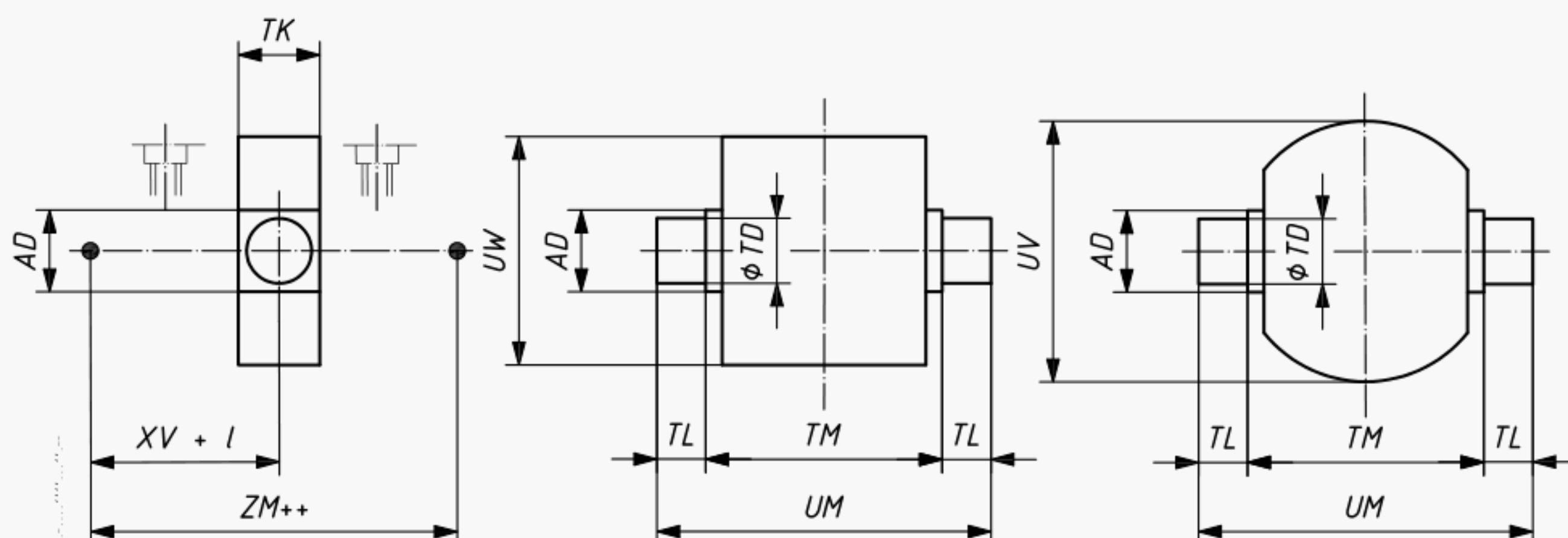


Figure 56 — MDT 4: Intermediate trunnion (male) fixed or mobile — Double rod

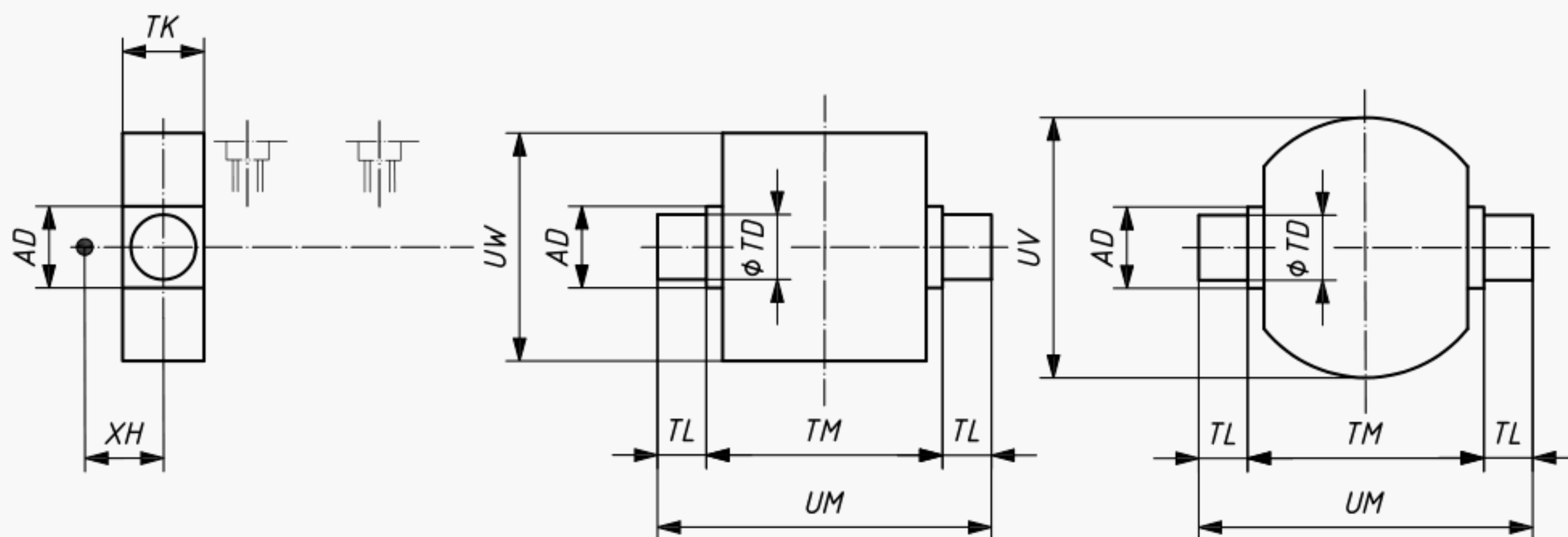


Figure 57 — MT 5: Head, detachable trunnion (male)

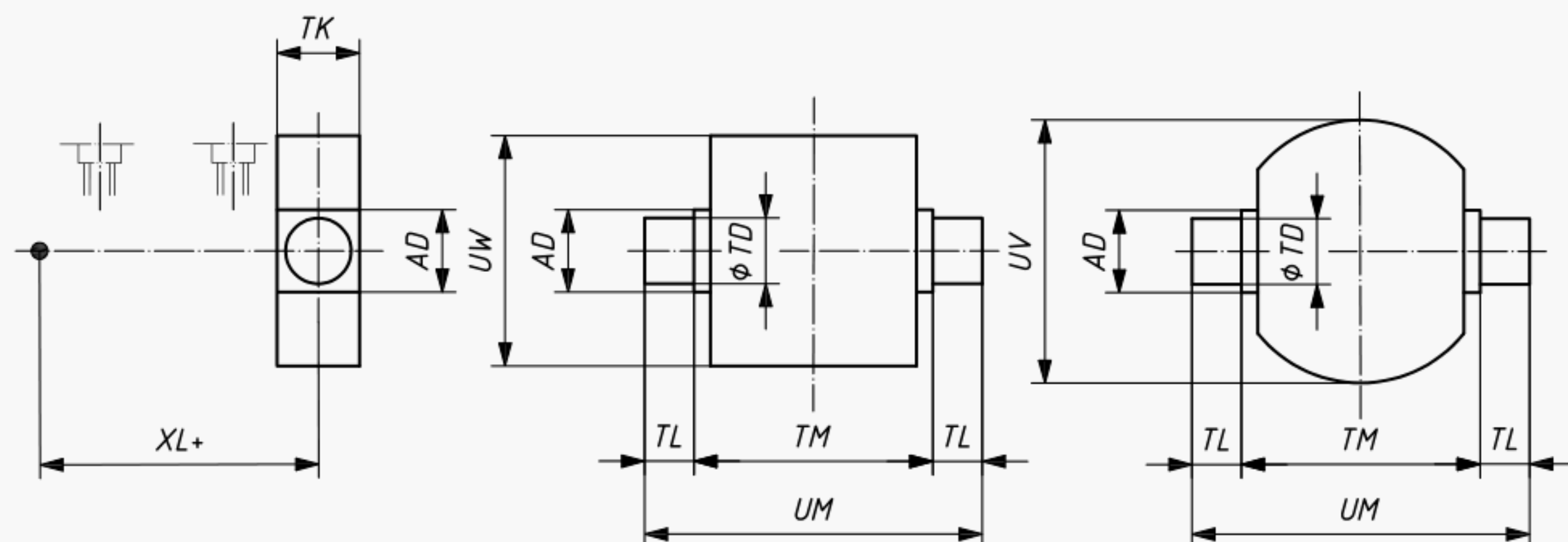


Figure 58 — MT 6: Cap, detachable trunnion (male)

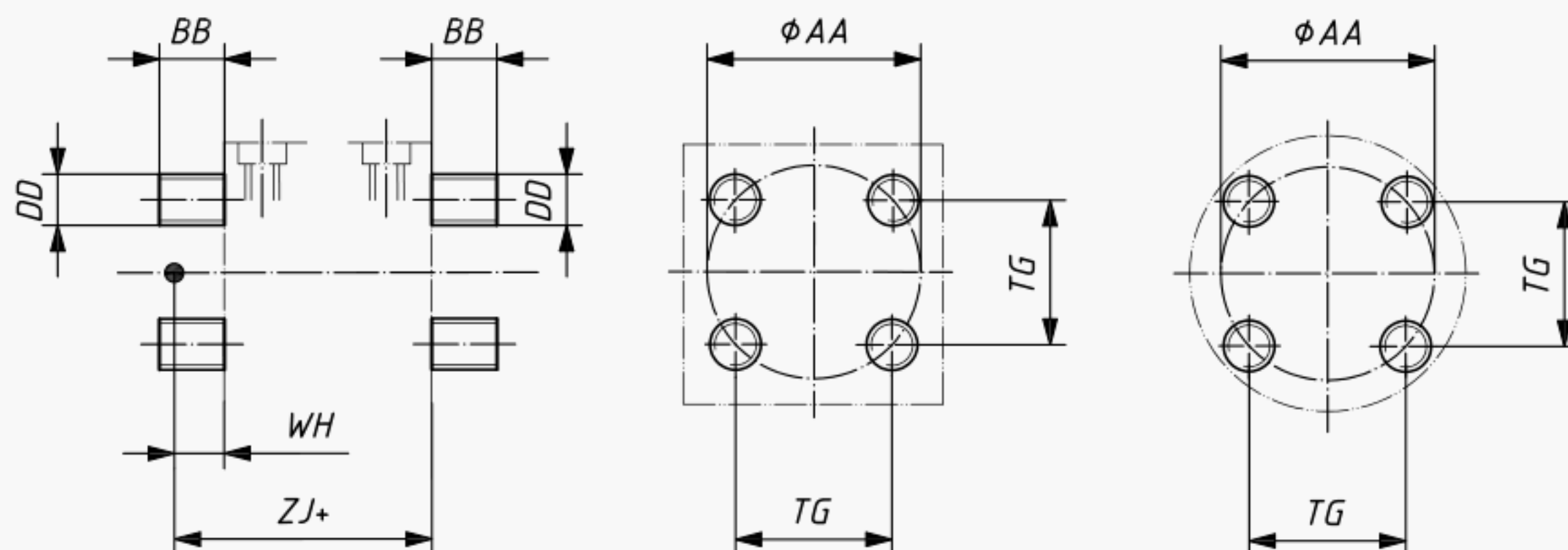


Figure 59 — MX 1: Both ends studs or tie rods extended

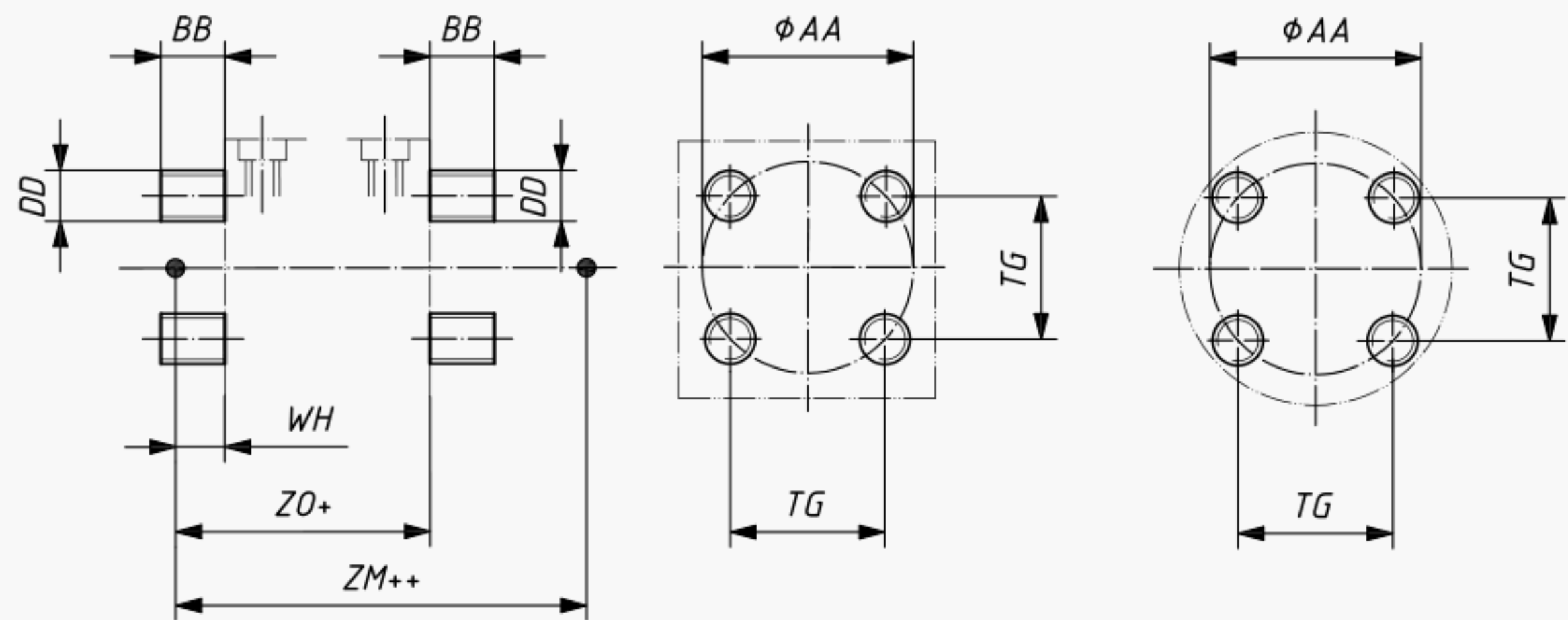


Figure 60 — MDX 1: Both ends studs or tie rods extended — Double rod

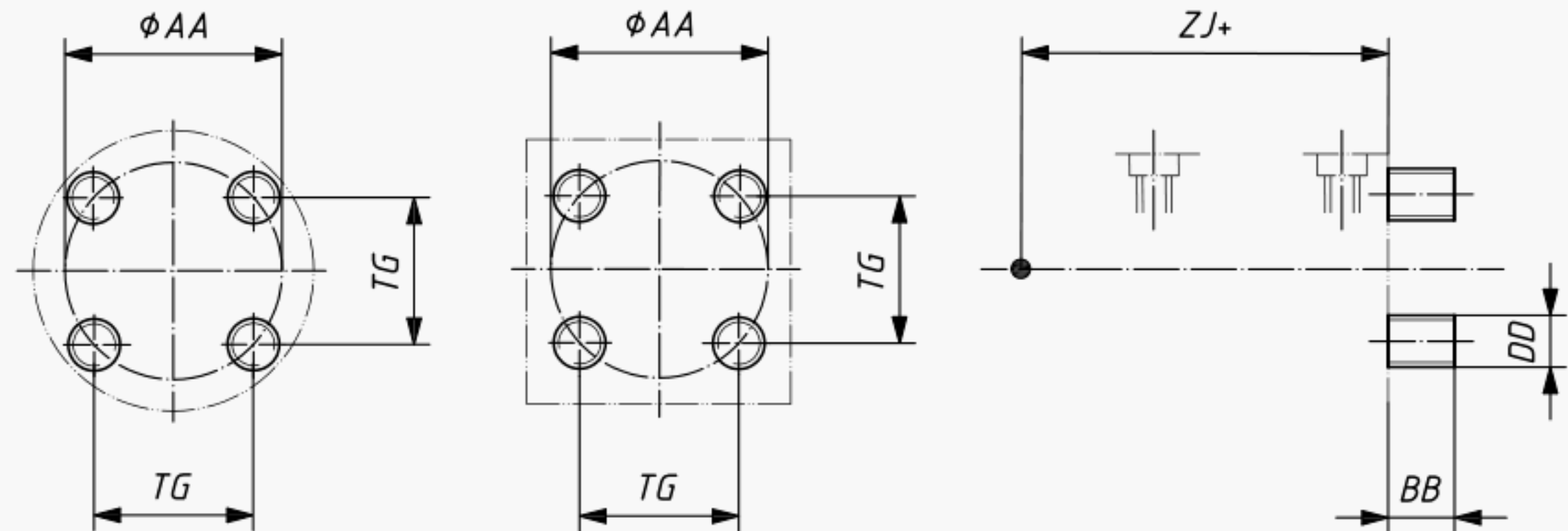


Figure 61 — MX 2: Cap studs or tie rods extended

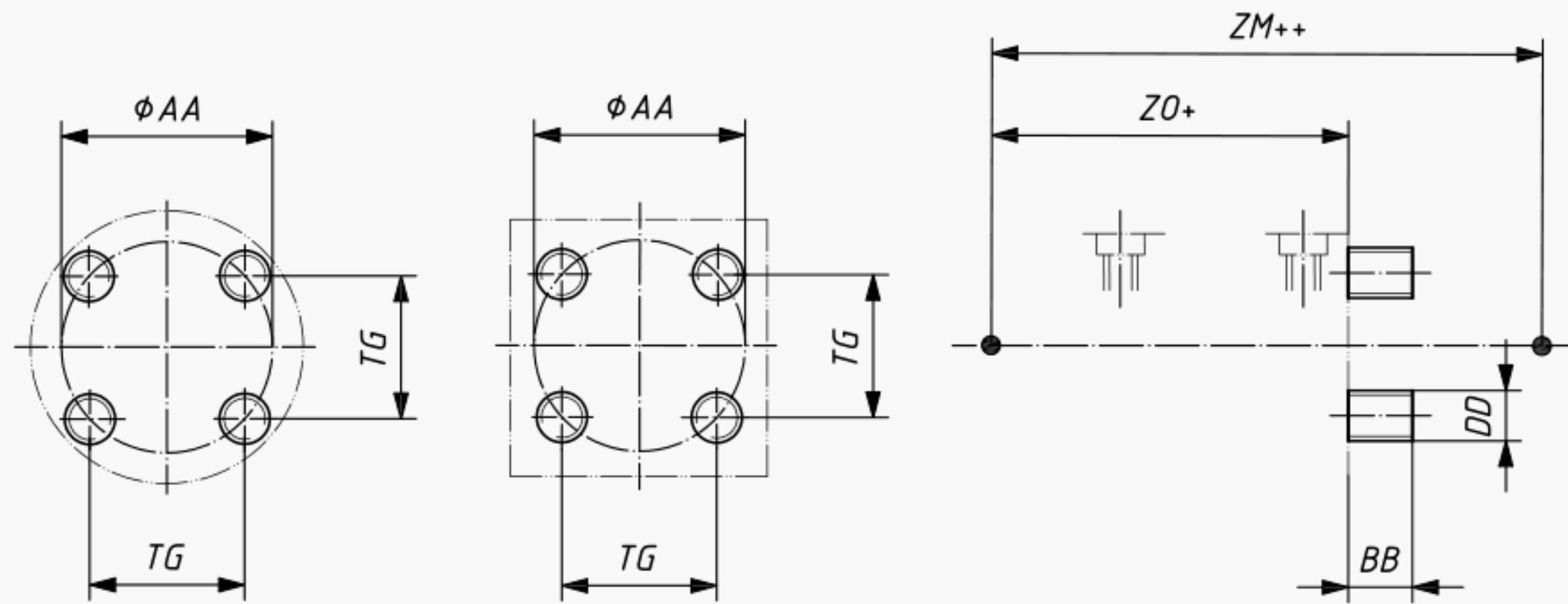


Figure 62 — MDX 2: Cap studs or tie rods extended — Double rod

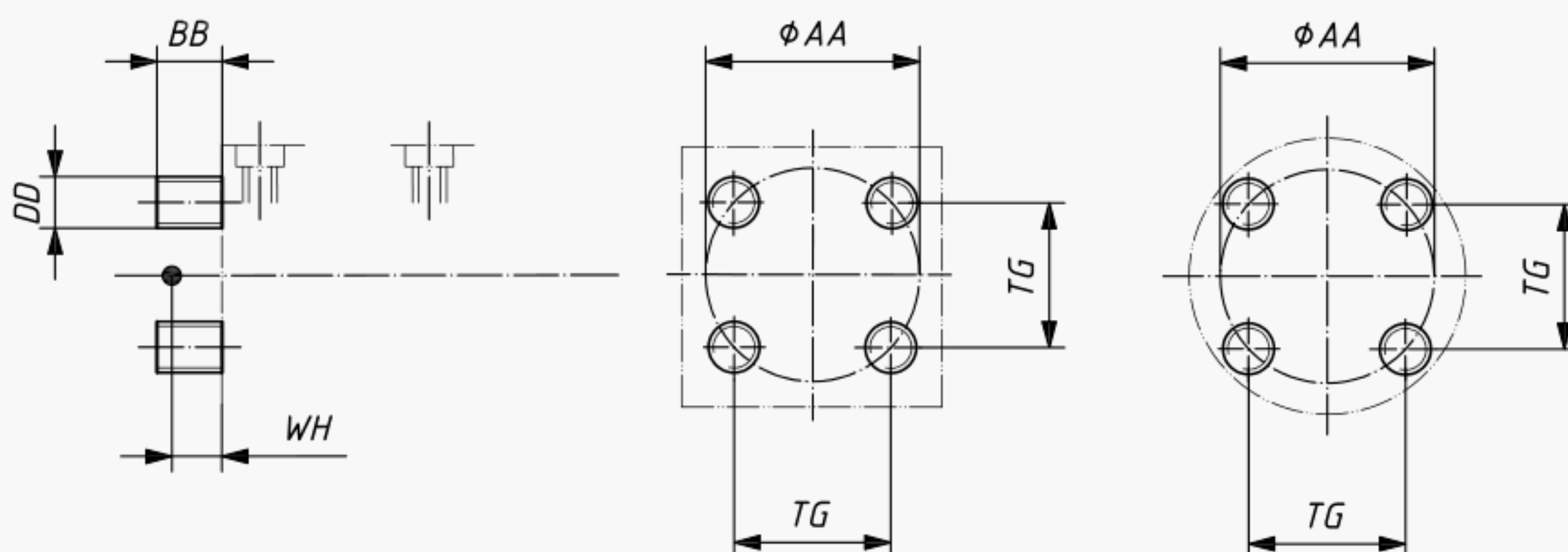


Figure 63 — MX 3: Head studs or tie rods extended

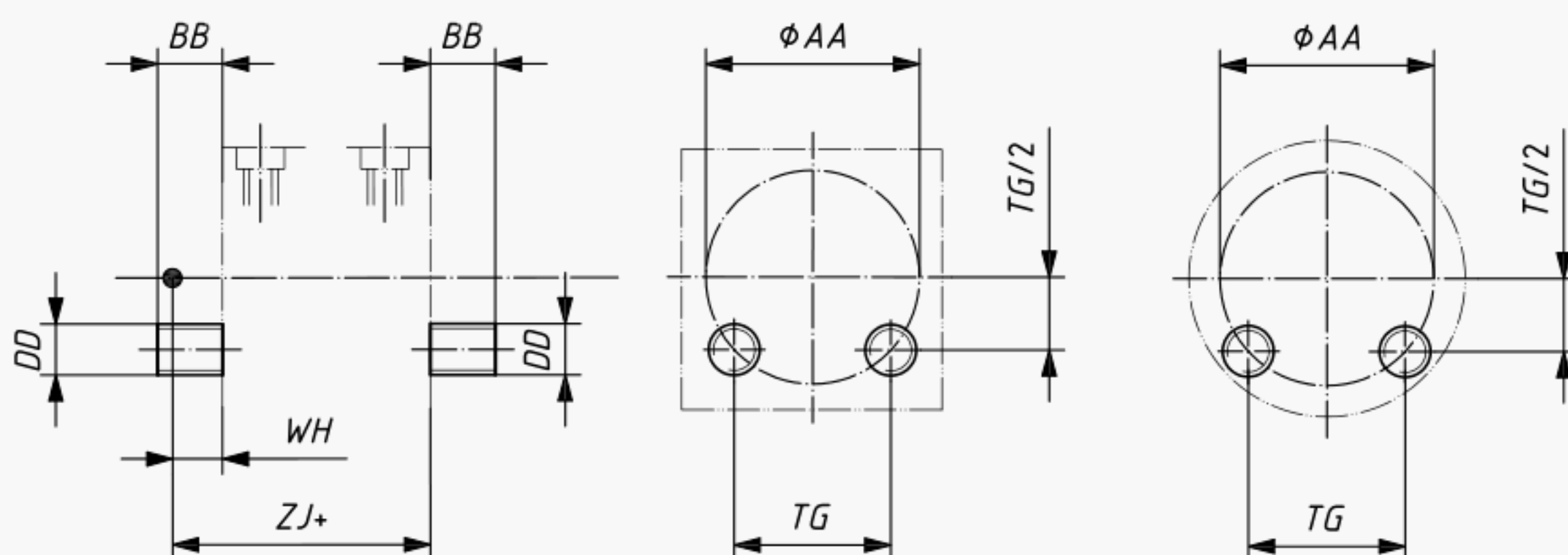


Figure 64 — MX 4: Both ends 2 studs or tie rods extended

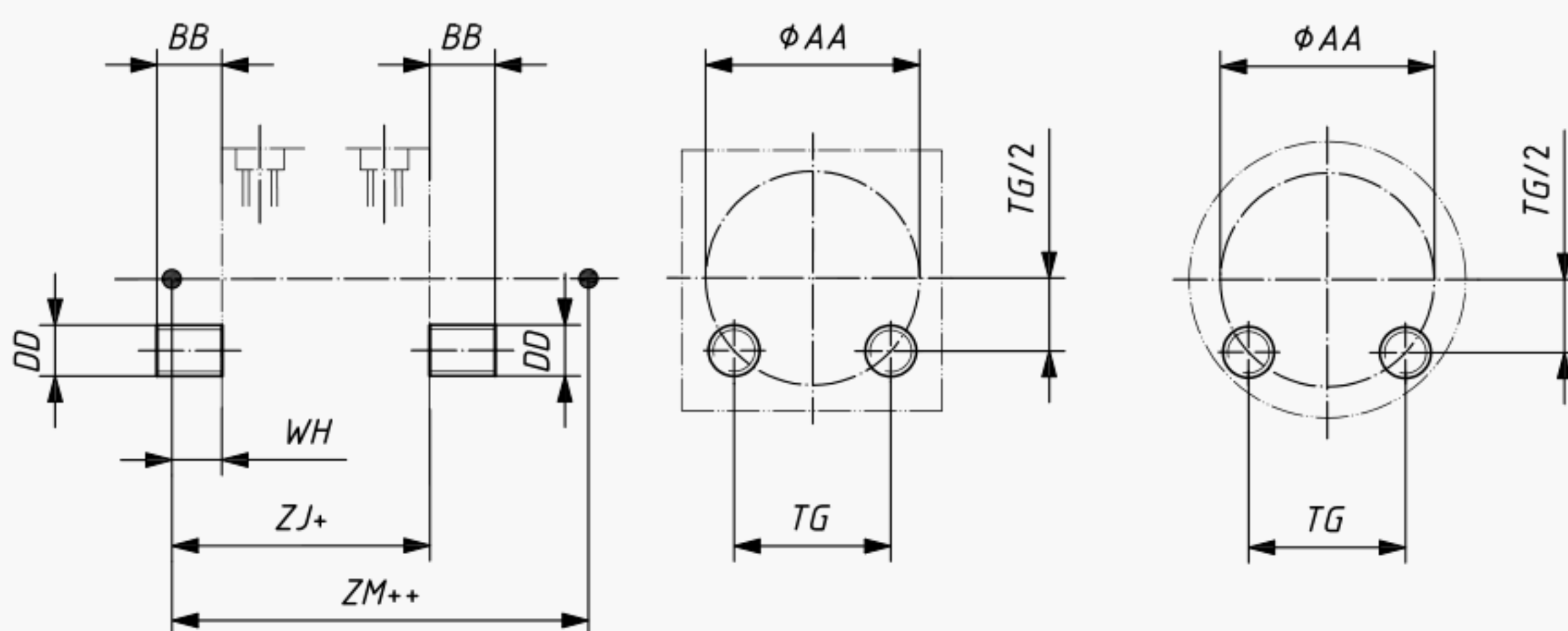


Figure 65 — MDX 4: Both ends 2 studs or tie rods extended — Double rod

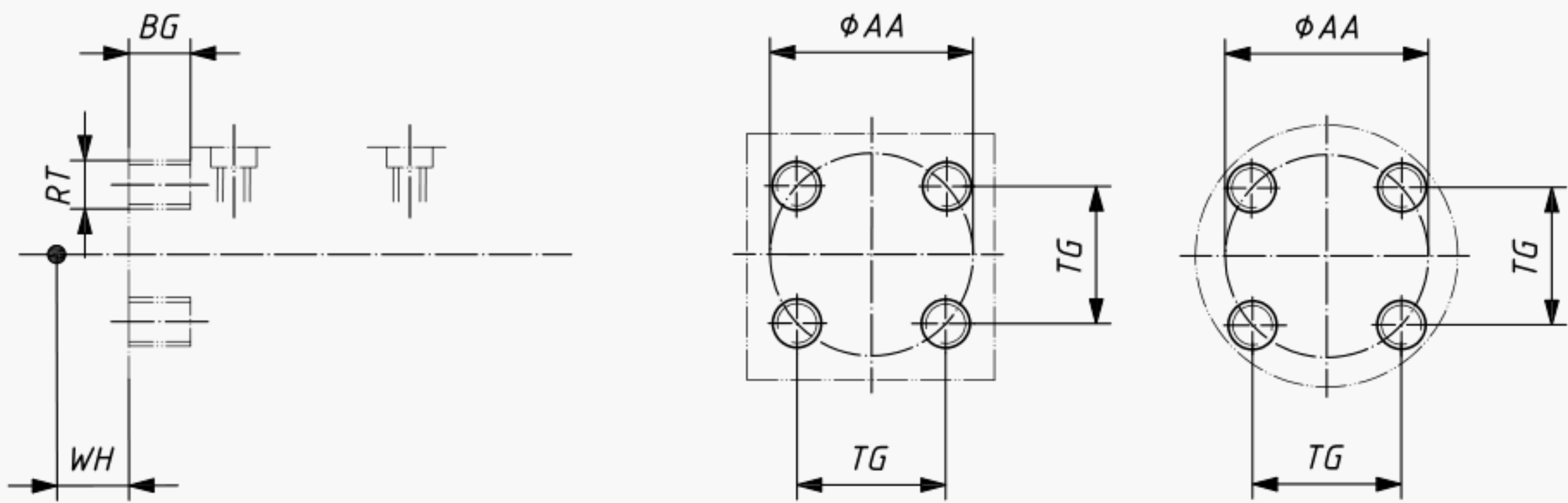


Figure 66 — MX 5: Head, tapped

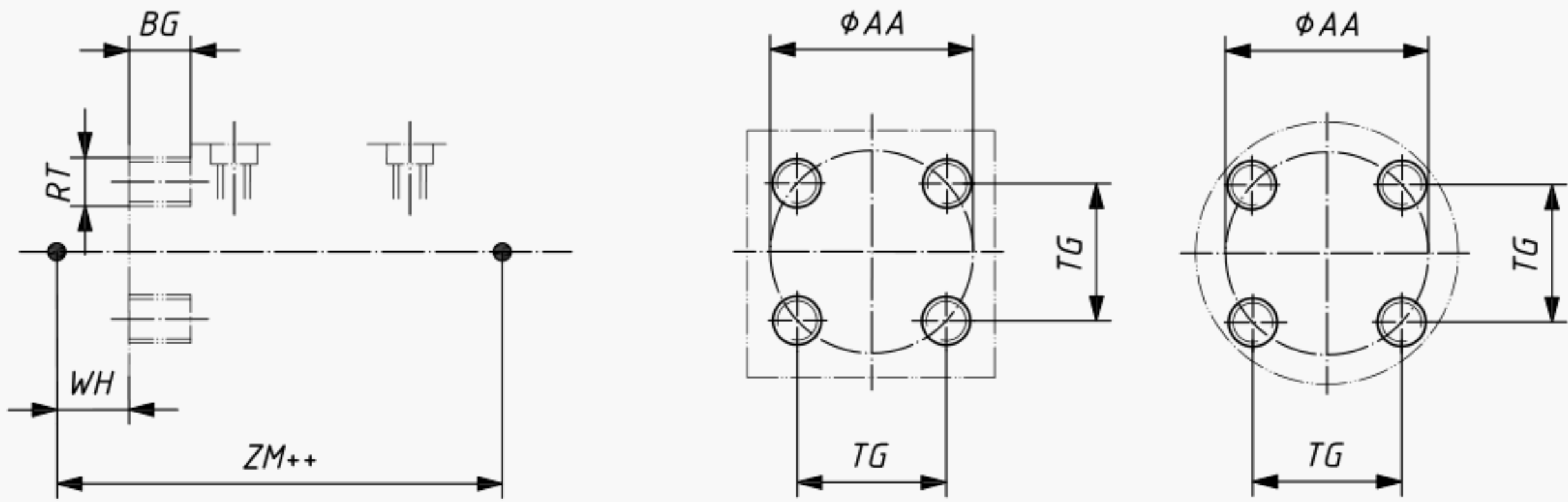


Figure 67 — MDX 5: Head, tapped — Double rod

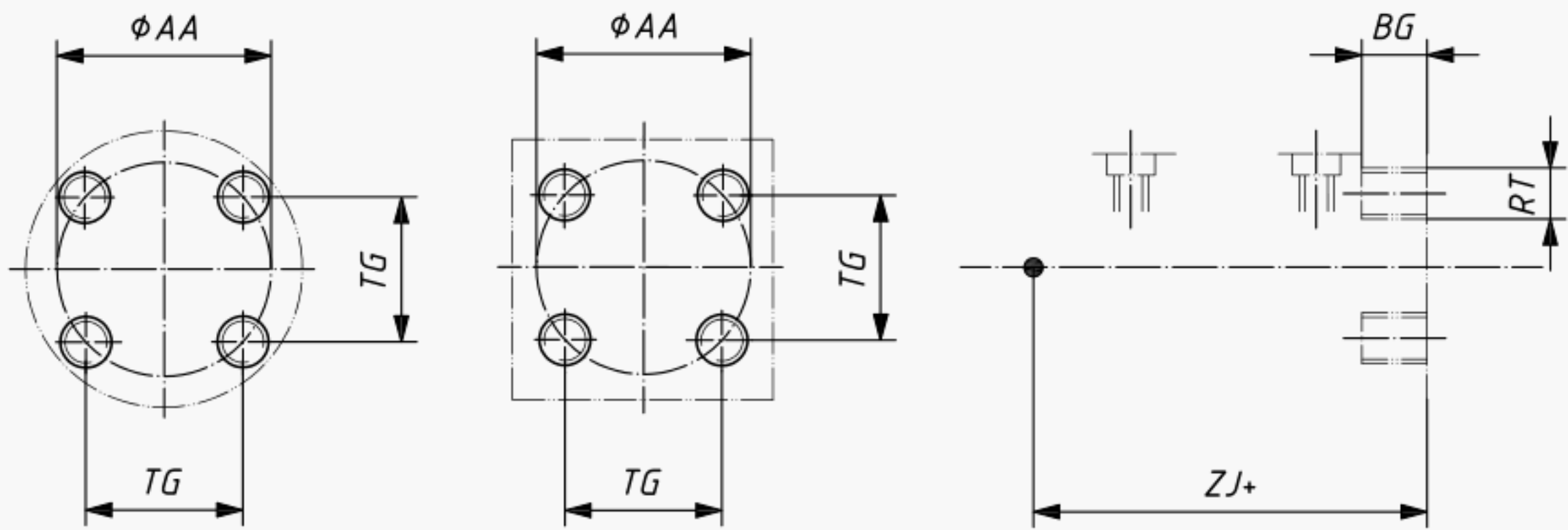


Figure 68 — MX 6: Cap, tapped

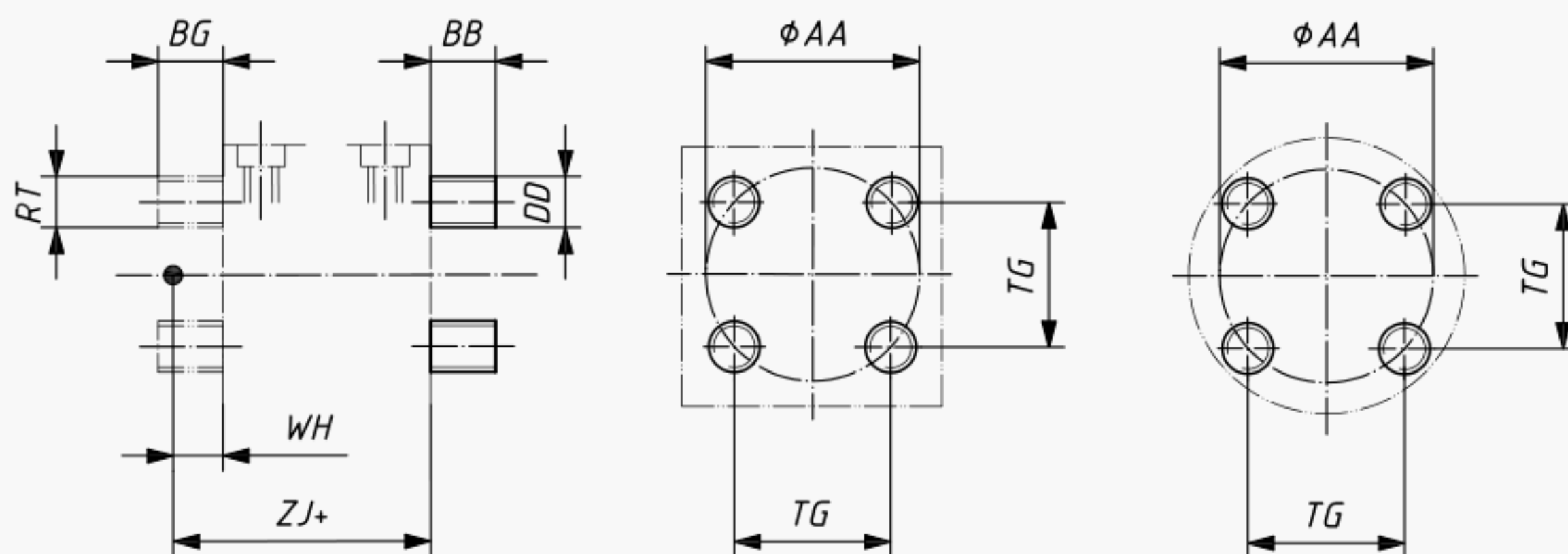


Figure 69 — MX 7: Head, tapped, and cap studs or tie rods extended

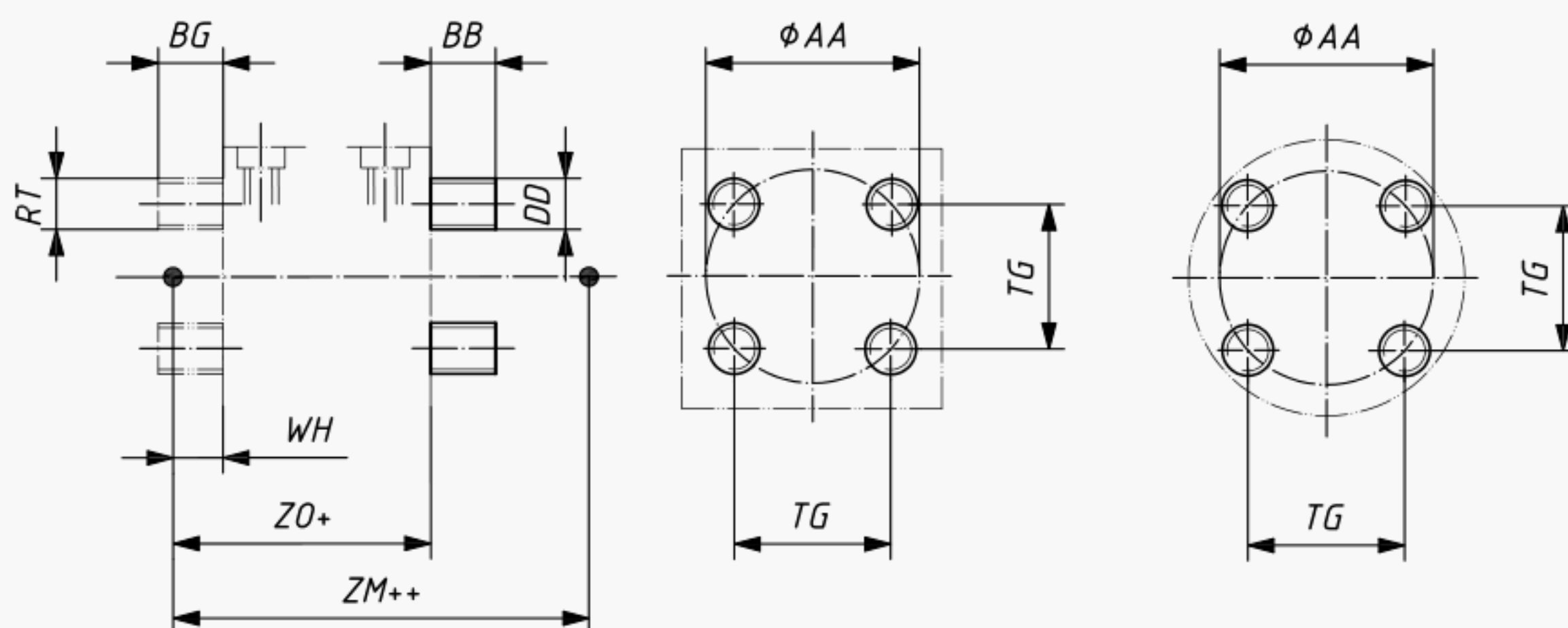


Figure 70 — MDX 7: Head, tapped, and cap studs or tie rods extended — Double rod

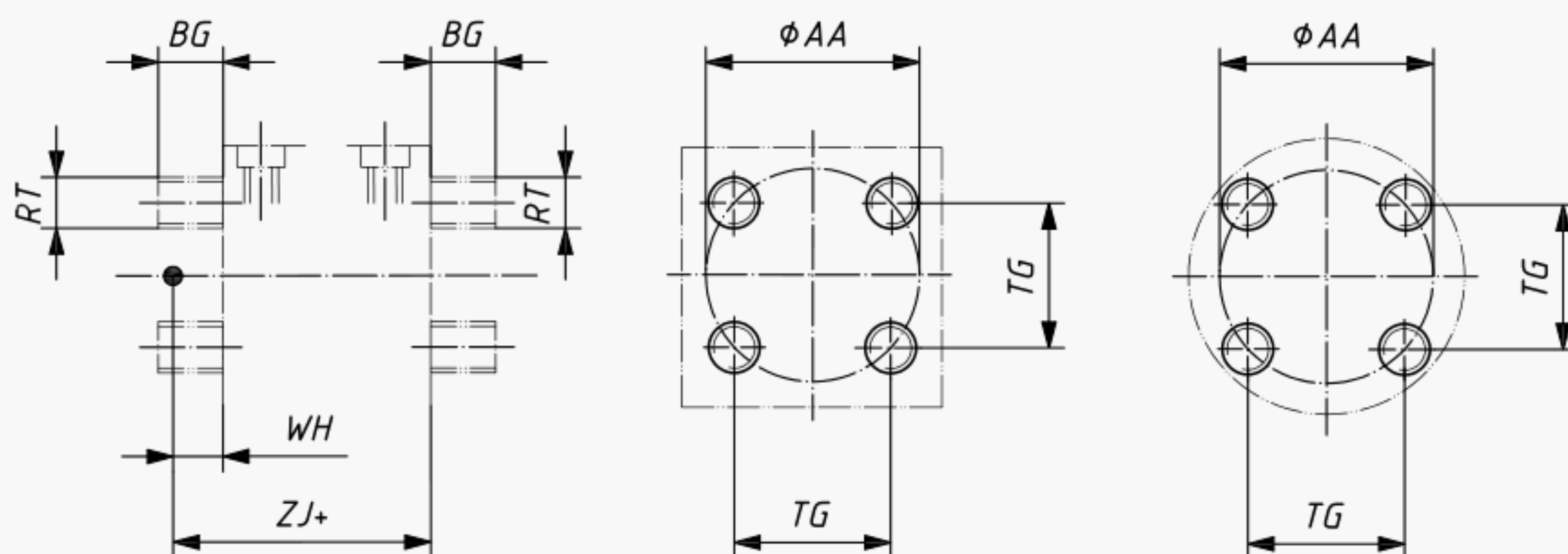


Figure 71 — MX 8: Head and cap, tapped

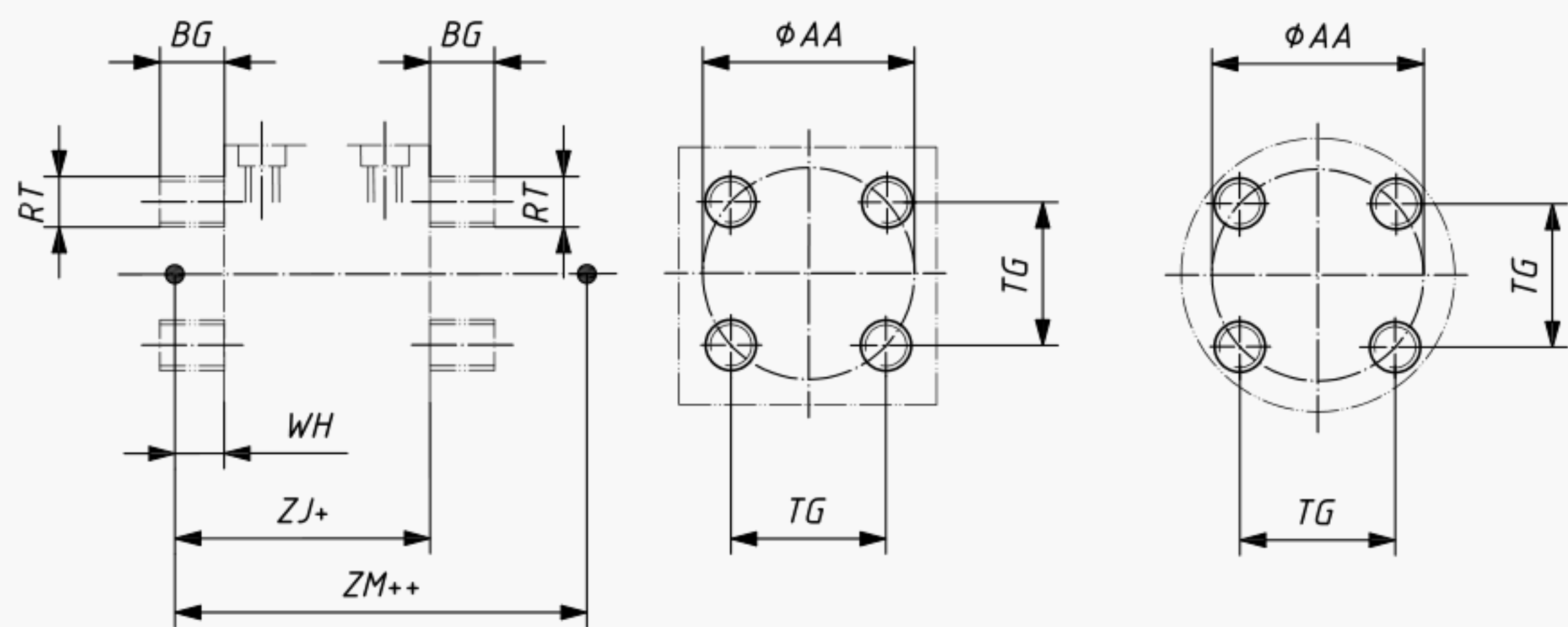


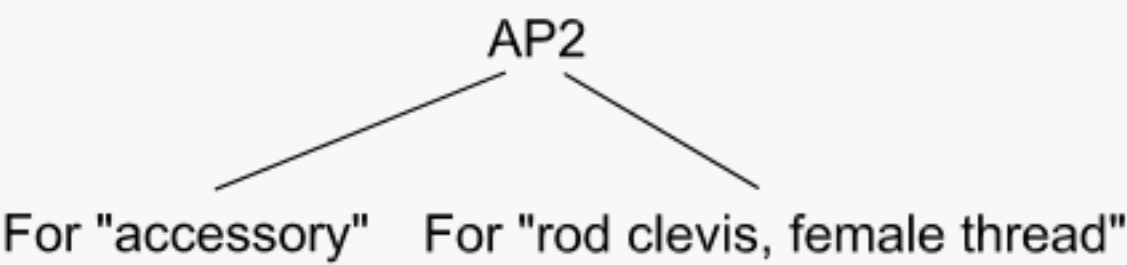
Figure 72 — MDX 8: Head and cap, tapped — Double rod

7 Identification code for accessory types

7.1 General

The identification code for cylinder accessory types consists of two letters and a number.

EXAMPLE



7.2 Accessory types

The accessory types defined in this International Standard are given with their identification code in Table 3.

Table 3 — Accessory types

| Identification code | Description | Figure | With split pins - S ^a | With rings - R ^a | With locking plate - L ^a | With key way - K ^a | With centre hole - H ^a |
|-----------------------------|---|------------|-------------------------------------|--------------------------------|--|----------------------------------|--------------------------------------|
| AA4 | Pivot pin, plain | 84, 86, 90 | - S | - R | - L | | |
| AA6 | Pivot pin, spherical bearing | 85, 87, 88 | - S | - R | - L | | |
| AB2 | Eye bracket, straight | 77 | | | | - K | |
| AB3 | Clevis bracket, in angle | 79 | | | - L | - K | - H |
| AB4 | Clevis bracket, straight | 78 | | | - L | - K | - H |
| AB5 | Clevis bracket, spherical eye, in angle | 81 | | | - L | - K | - H |
| AB6 | Clevis bracket, spherical eye, straight | 80 | | | - L | - K | - H |
| AB7 | Eye bracket, in angle | 91 | | | | - K | |
| AF3 | Rod flange, circular | 82 | | | | | |
| AL6 | Locking plate for pivot pin | 89 | | | | | |
| AP2 | Rod clevis, female thread | 74 | | | - L | | |
| AP4 | Rod eye plain, female thread | 75 | | | | | |
| AP6 | Rod eye spherical, female thread | 76 | | | | | |
| AT4 | Trunnion bracket | 83 | | | | | |
| ^a See Figure 73. | | | | | | | |

EXAMPLE **AB4-L-K** Accessory Clevis bracket, straight with locking plate and key way.

7.3 Letter codes of accessories according to accessory type

The letter code for accessories according to type is shown in Figure 73 to Figure 91.

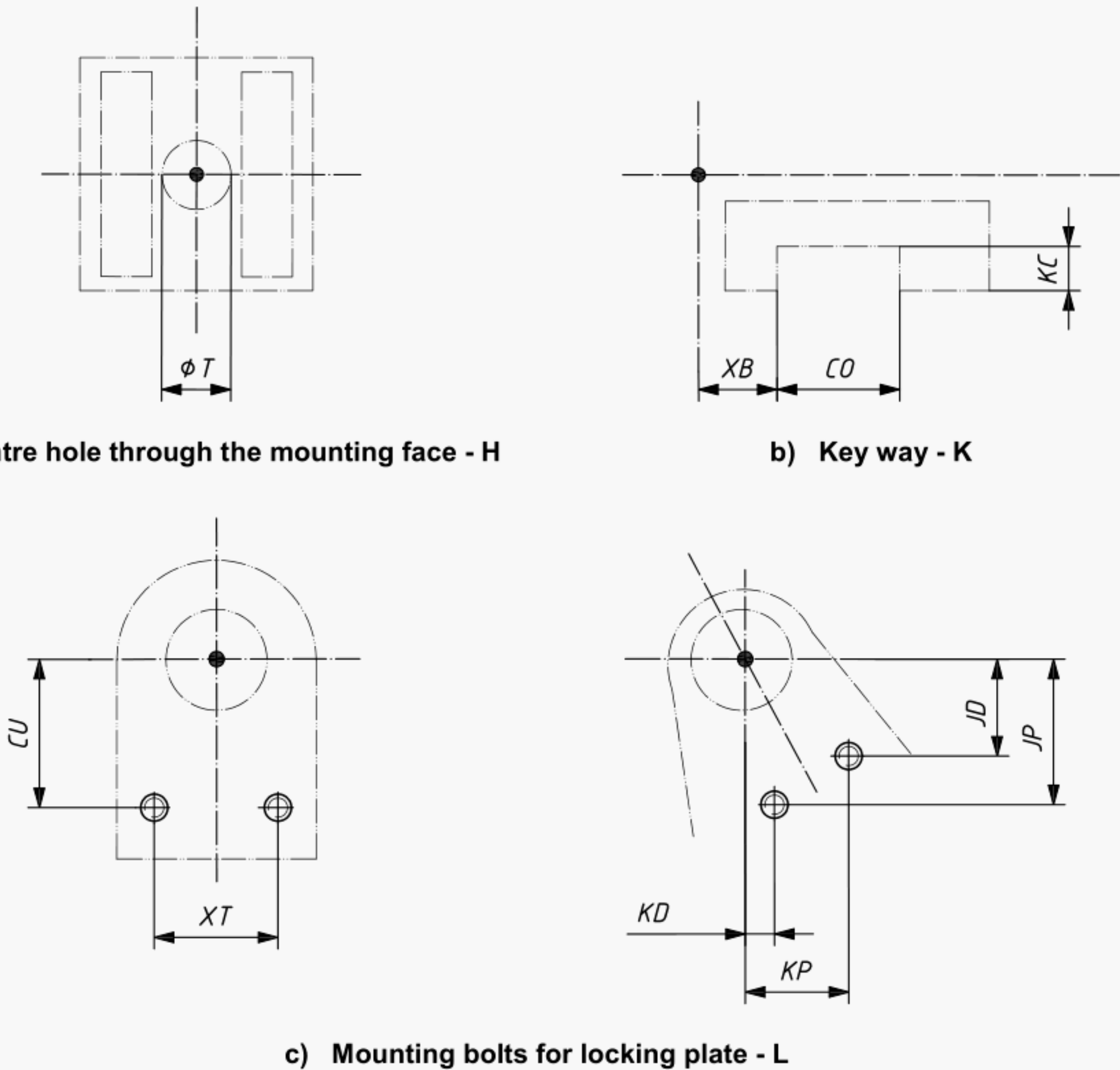


Figure 73 — Optional function for accessories

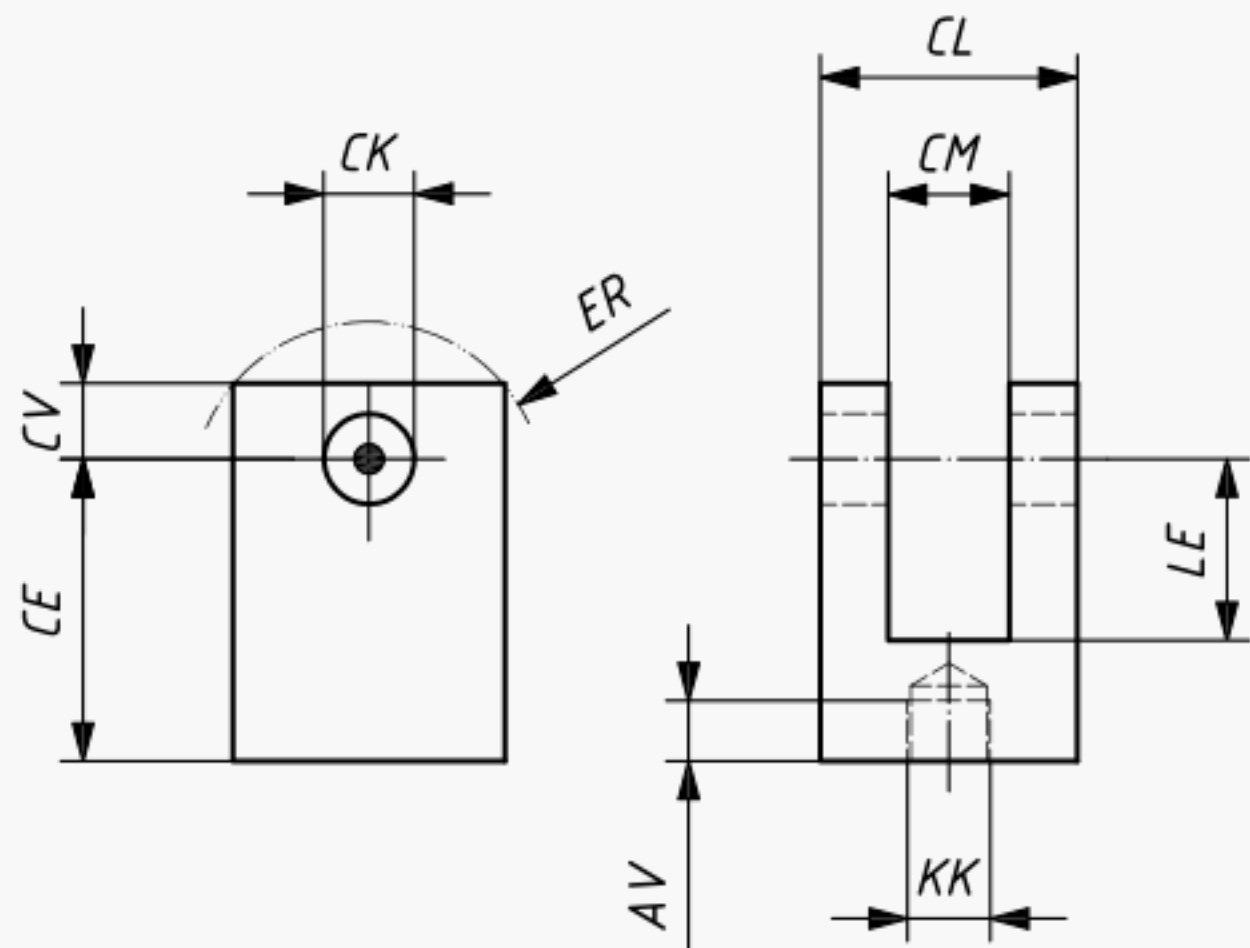


Figure 74 — AP2: Rod clevis, female thread

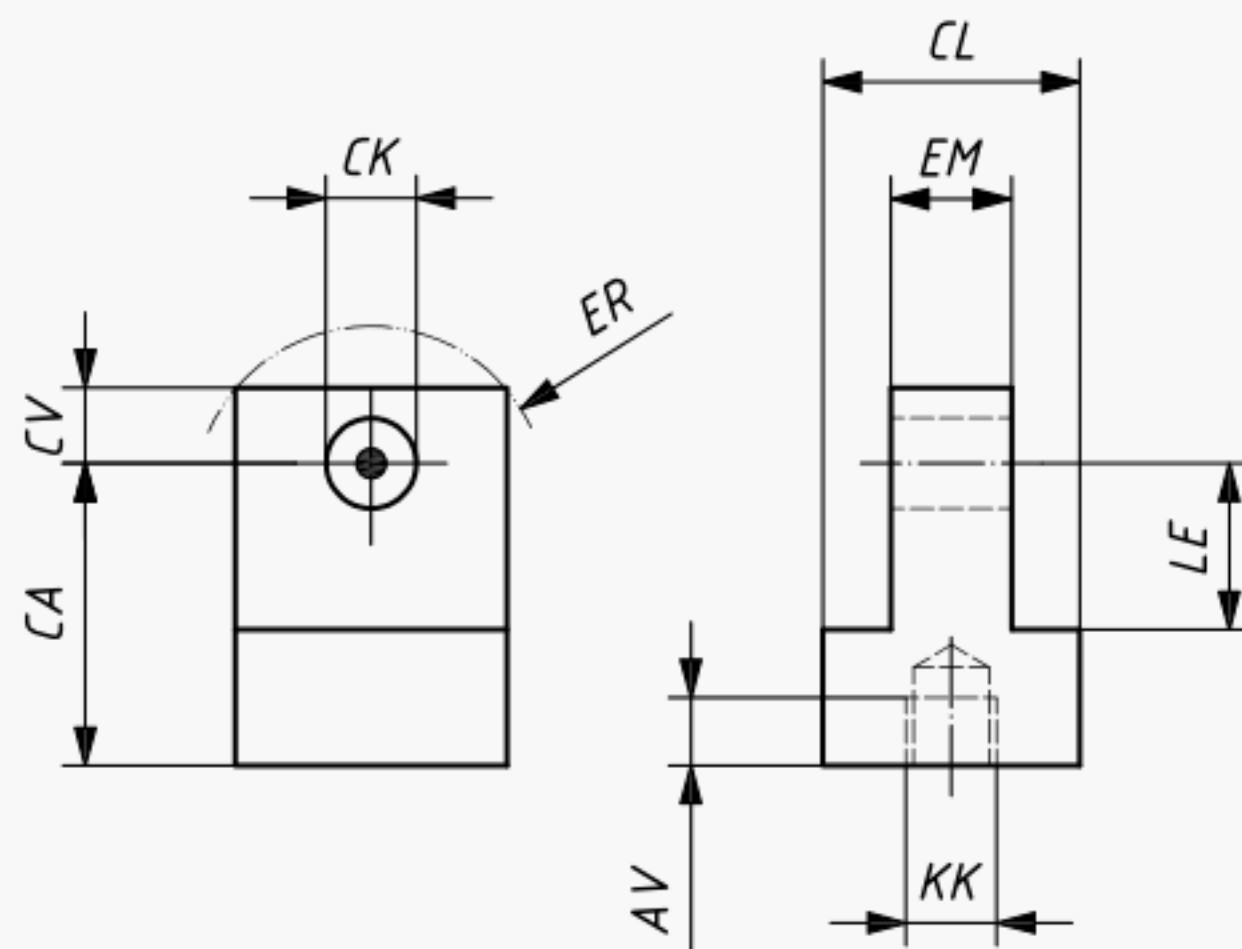


Figure 75 — AP4: Rod eye plain, female thread

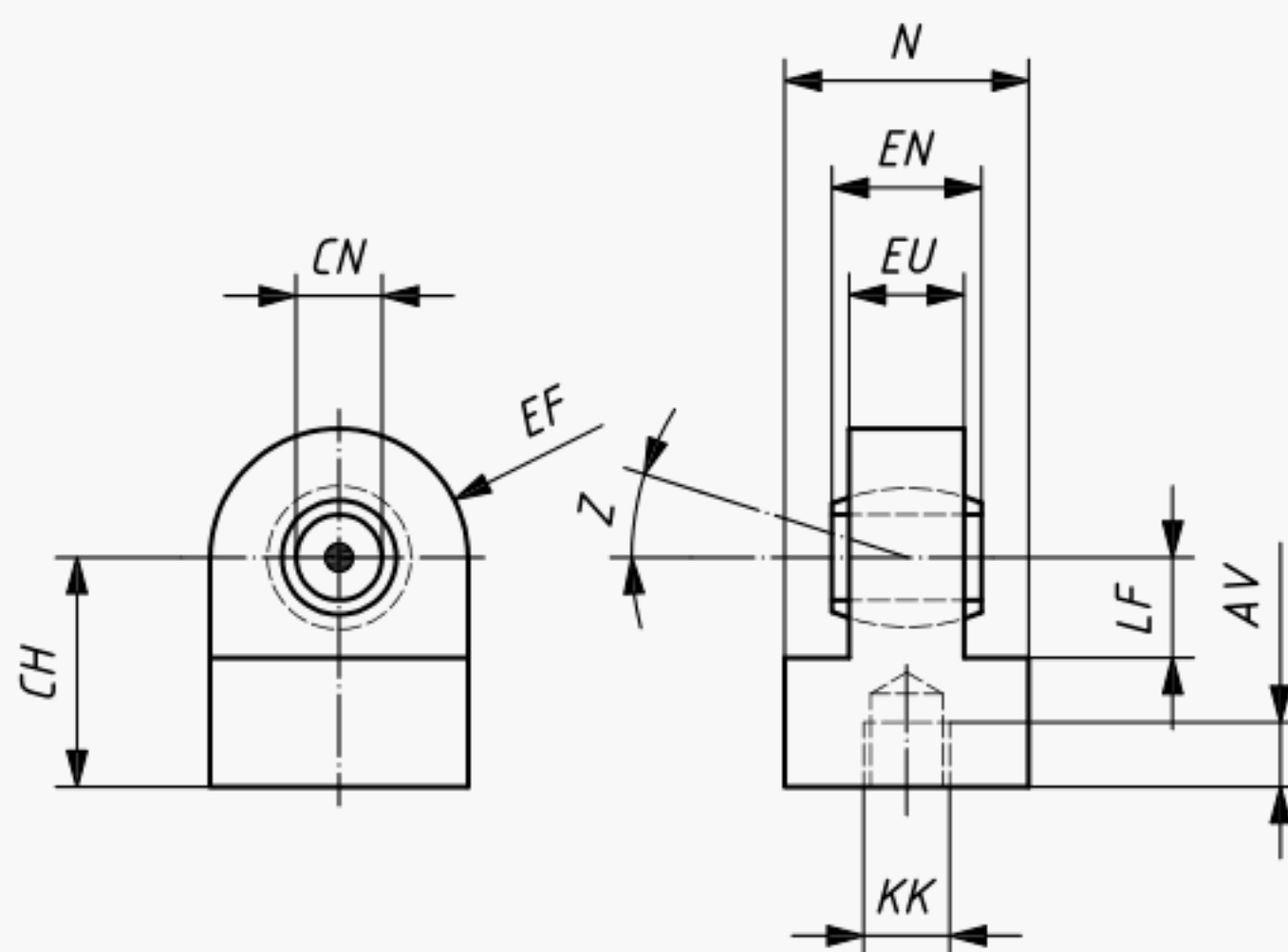


Figure 76 — AP6: Rod eye spherical, female thread

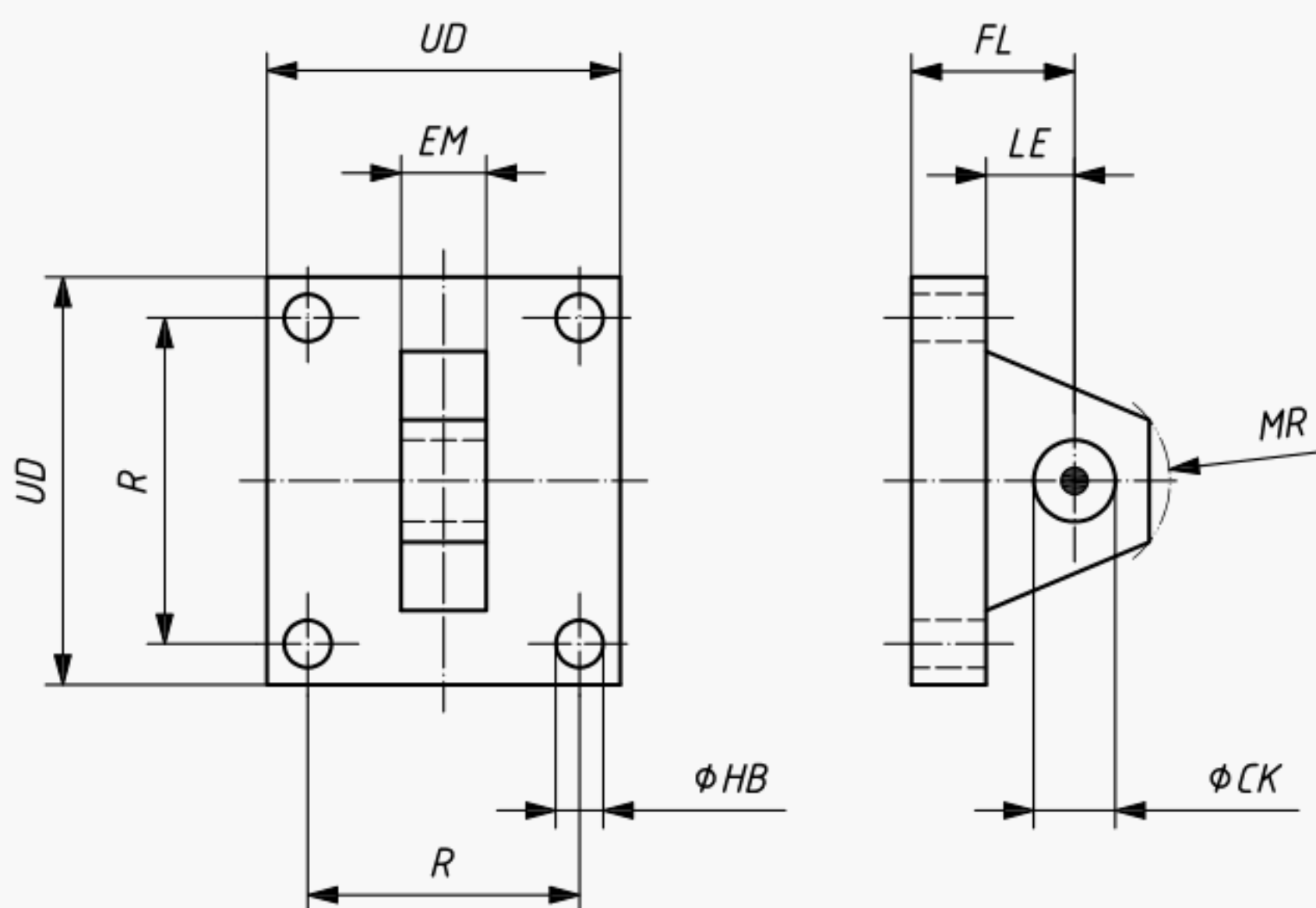


Figure 77 — AB2: Eye bracket, straight

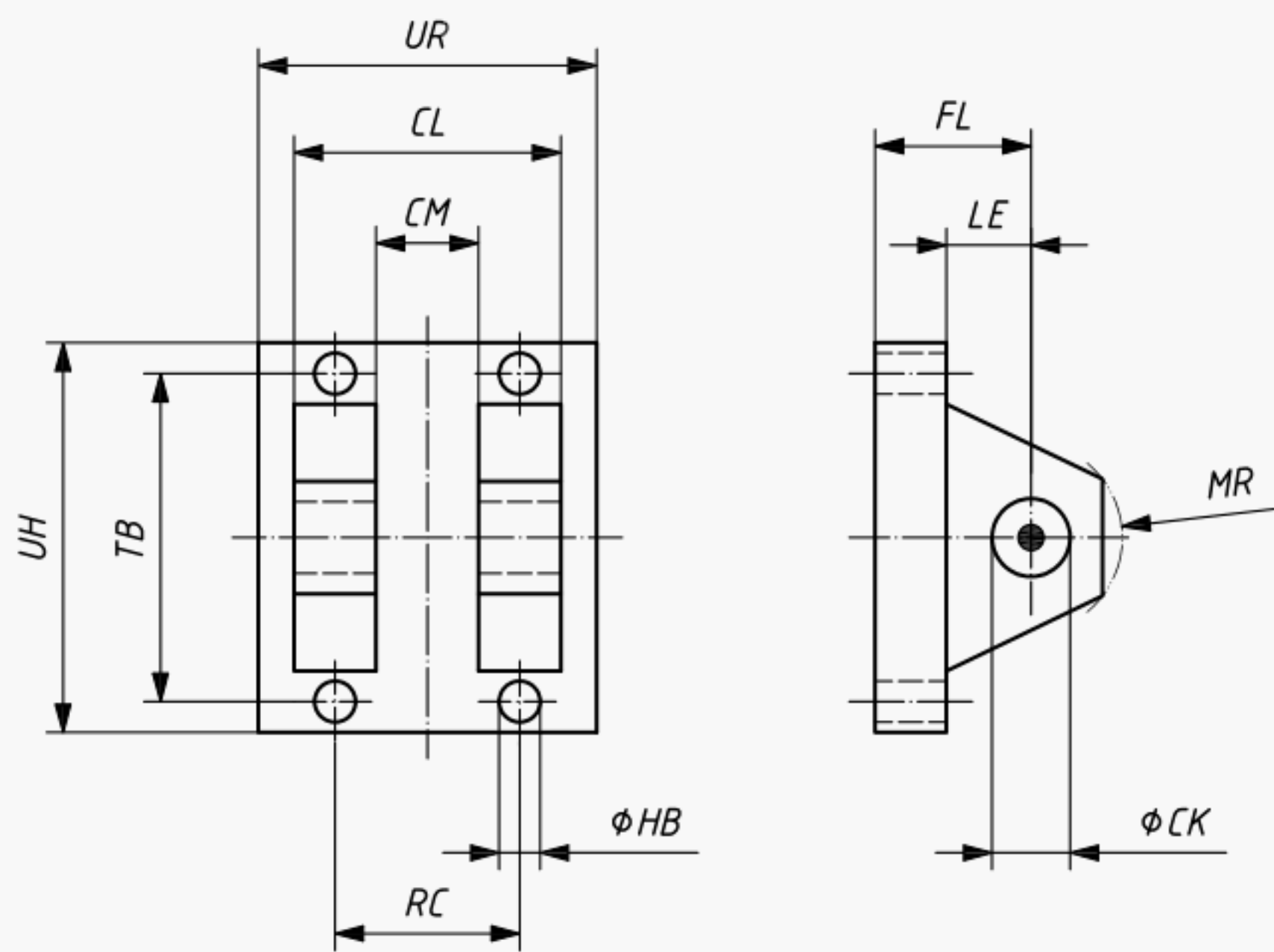


Figure 78 — AB4: Clevis bracket, straight

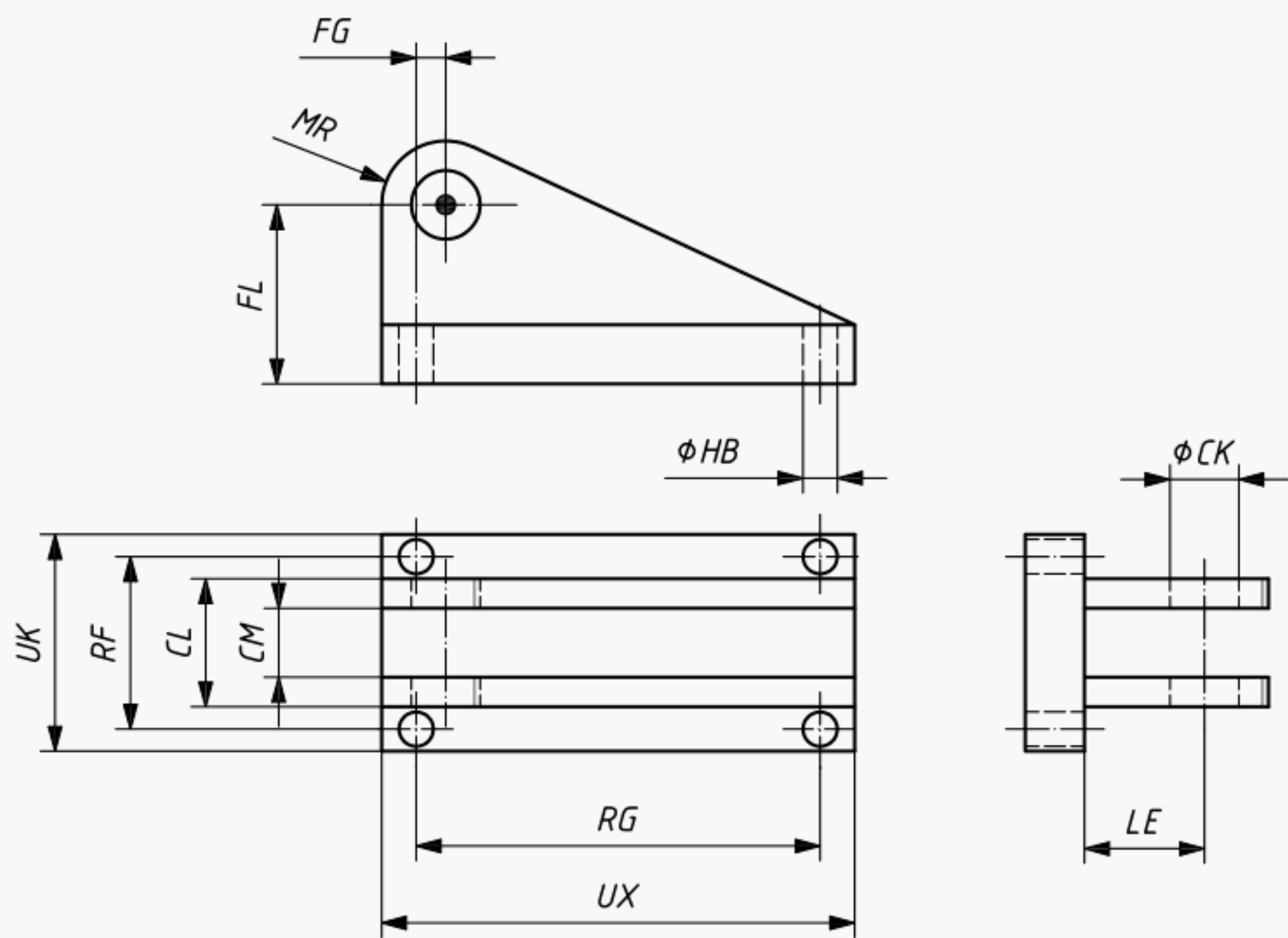


Figure 79 — AB3: Clevis bracket, in angle

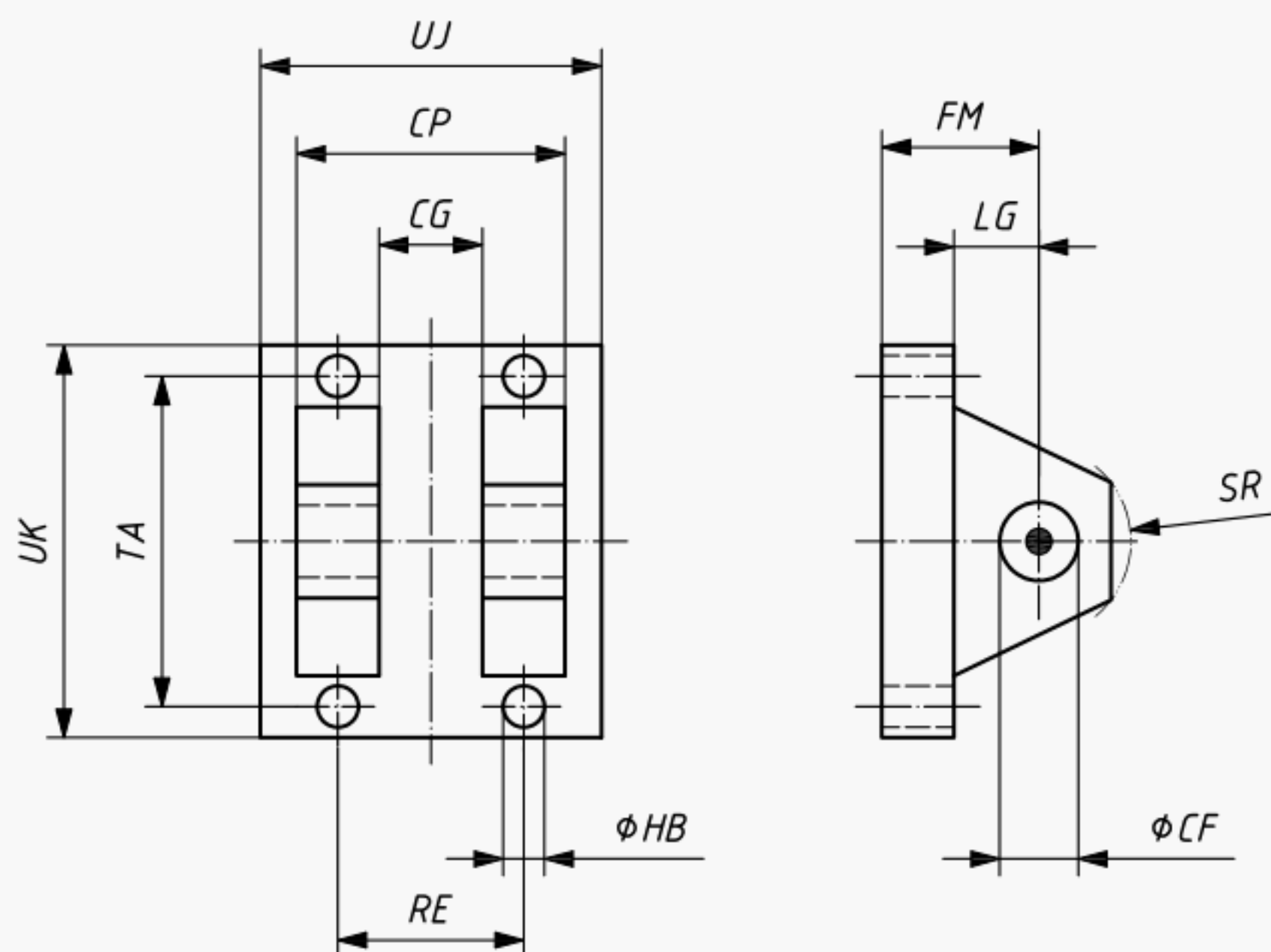


Figure 80 — AB6: Clevis bracket, spherical eye, straight

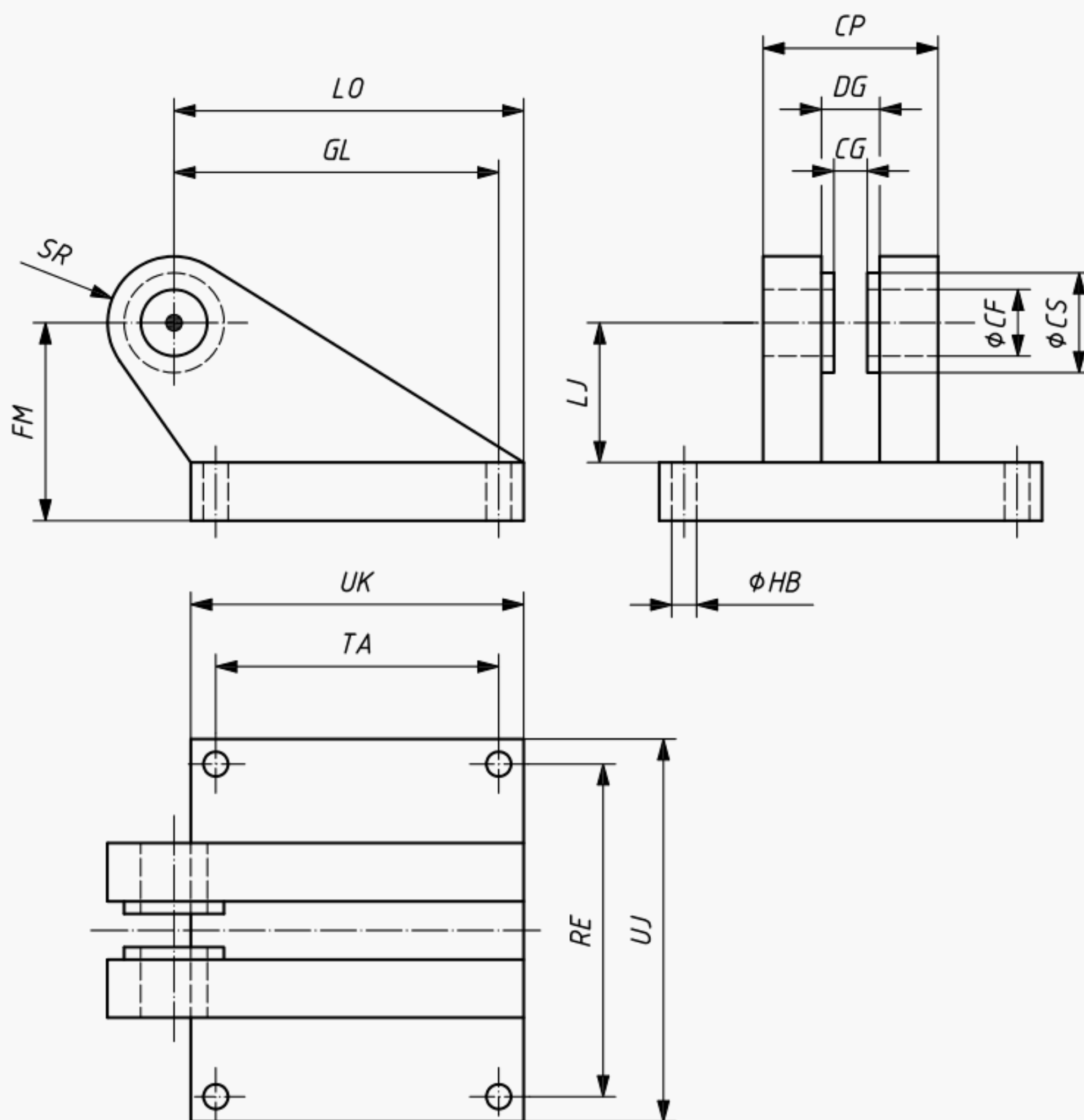


Figure 81 — AB5: Clevis bracket, spherical eye, in angle

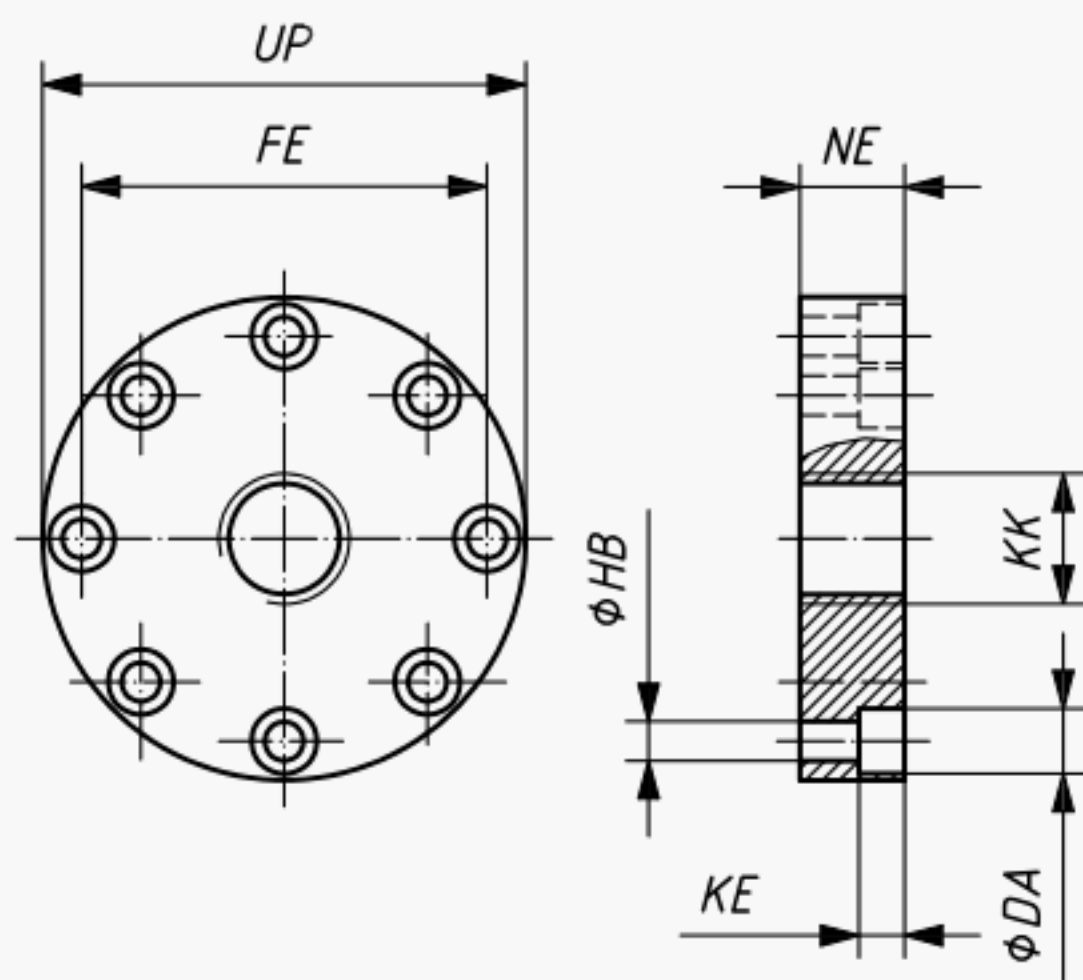


Figure 82 — AF3: Rod flange, circular

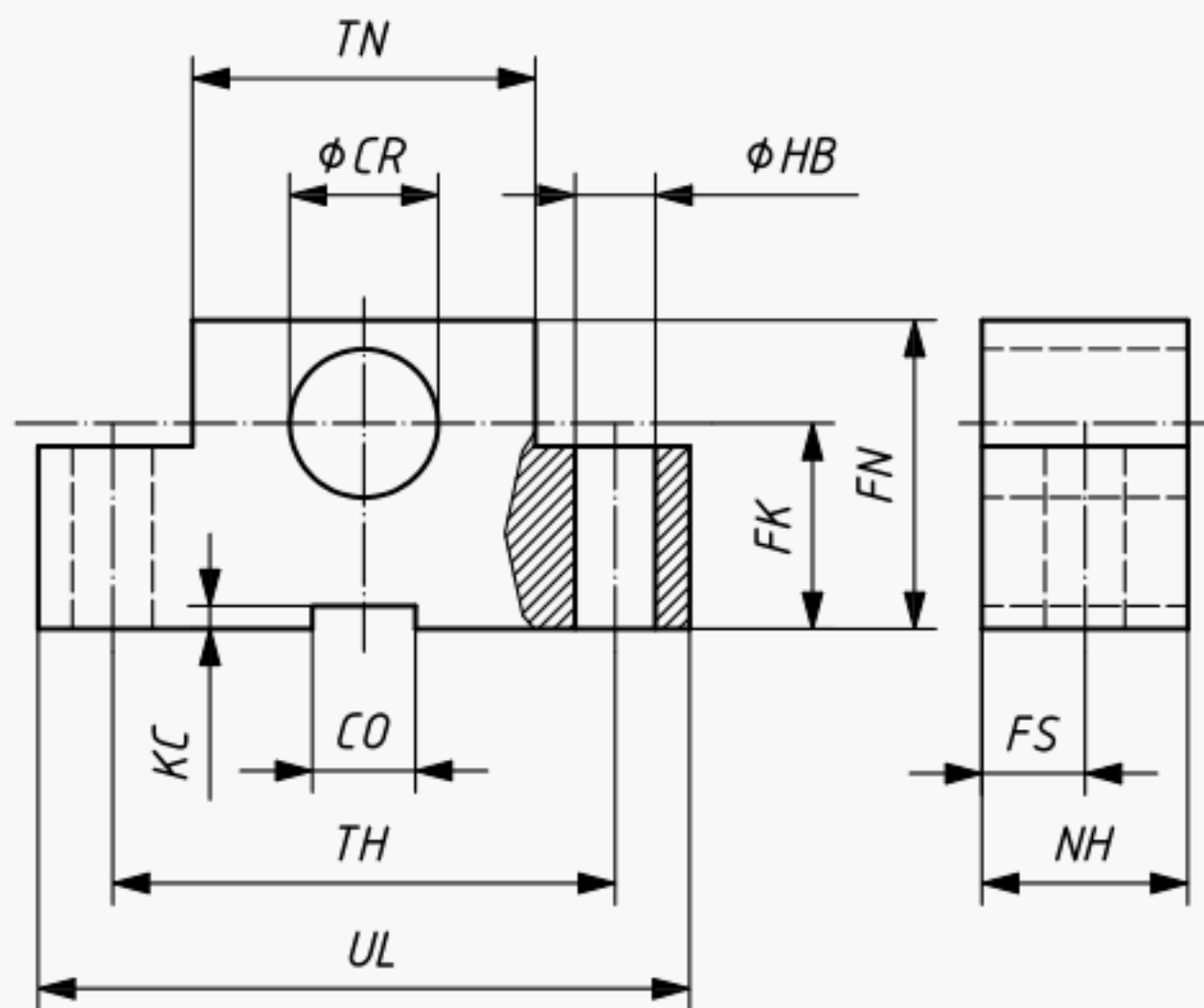


Figure 83 — AT4: Trunnion bracket

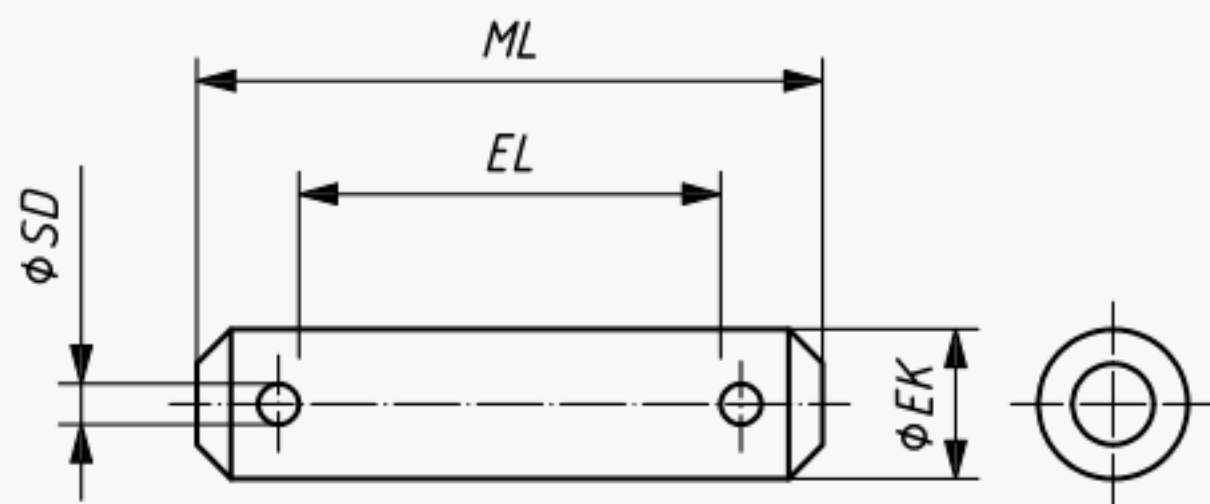


Figure 84 — AA4 - S: Pivot pin, plain, split pins

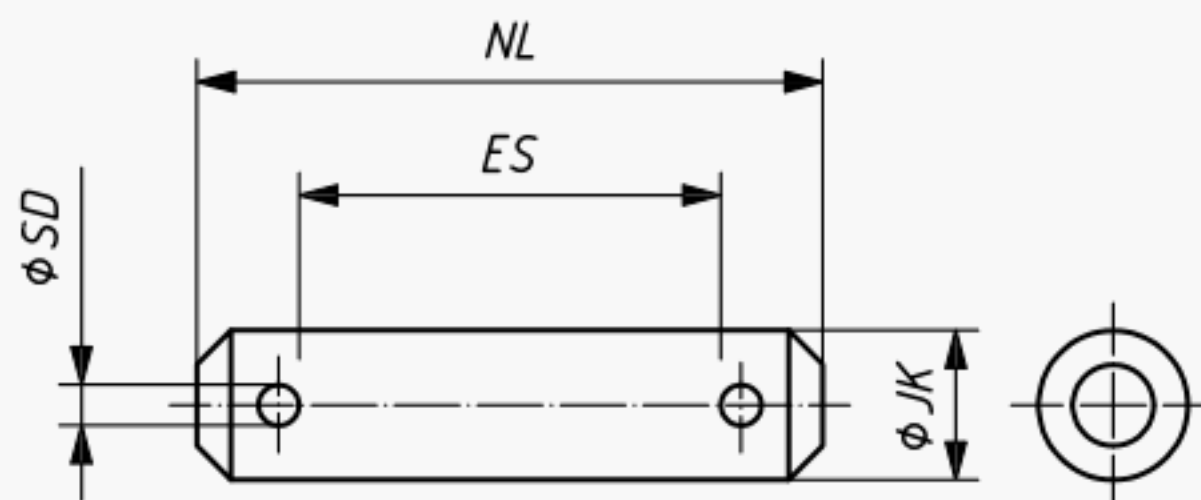


Figure 85 — AA6 - S: Pivot pin, spherical bearing, split pins

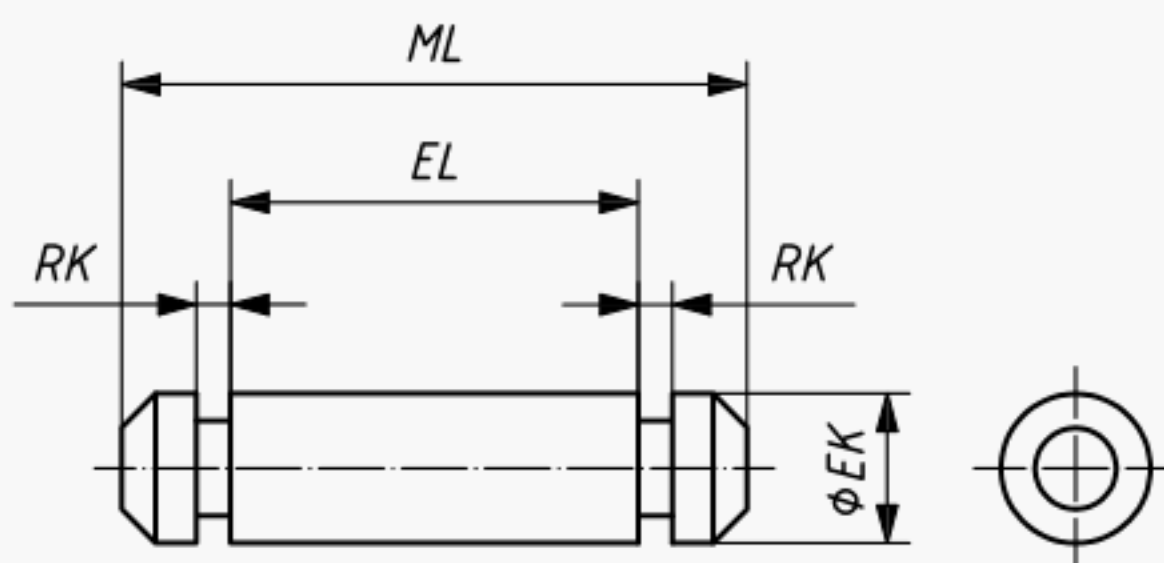


Figure 86 — AA4 - R: Pivot pin, plain, rings

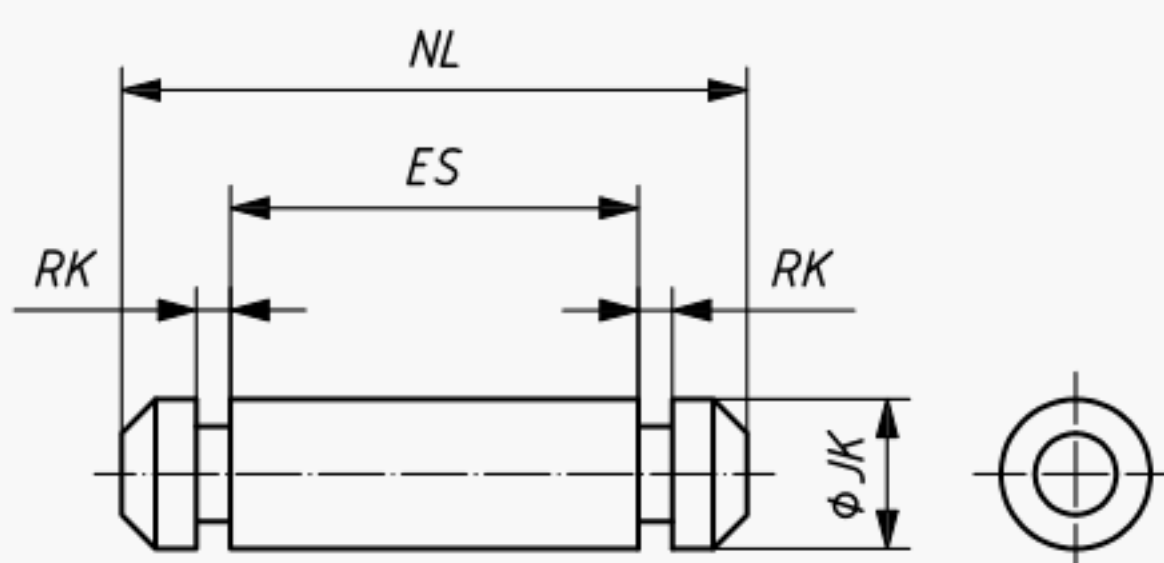


Figure 87 — AA6 - R: Pivot pin, spherical bearing, rings

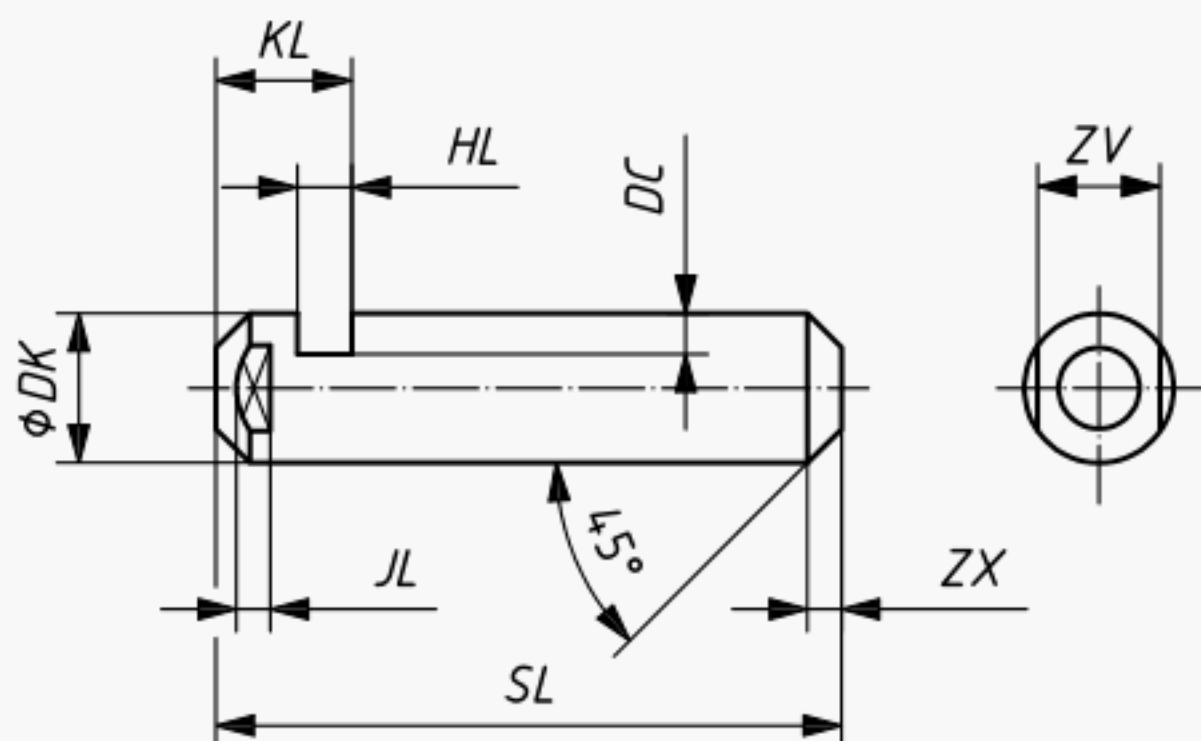
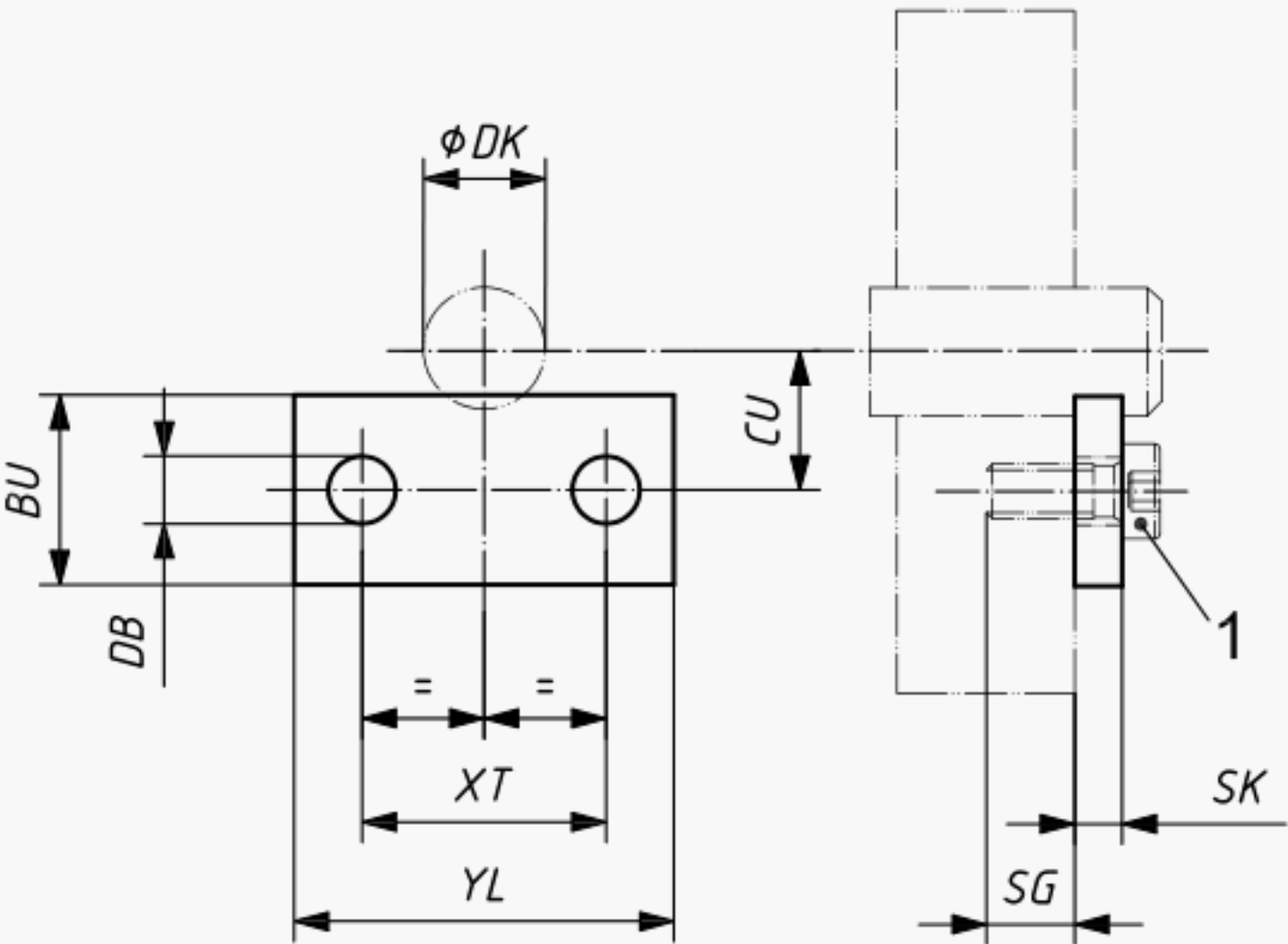


Figure 88 — AA6 - L: Pivot pin, spherical bearing, locking plate



Key
1 screw

Figure 89 — AL6: Locking plate for pivot pin

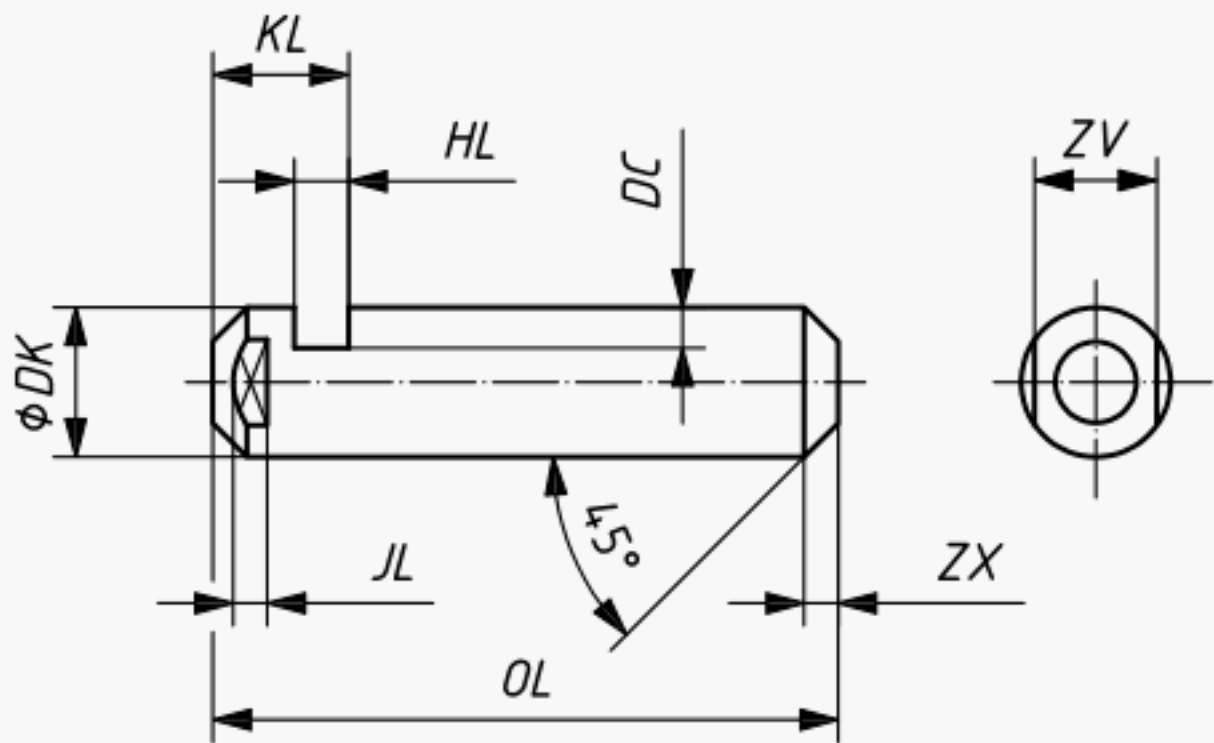


Figure 90 — AA4 - L: Pivot pin, plain, locking plate

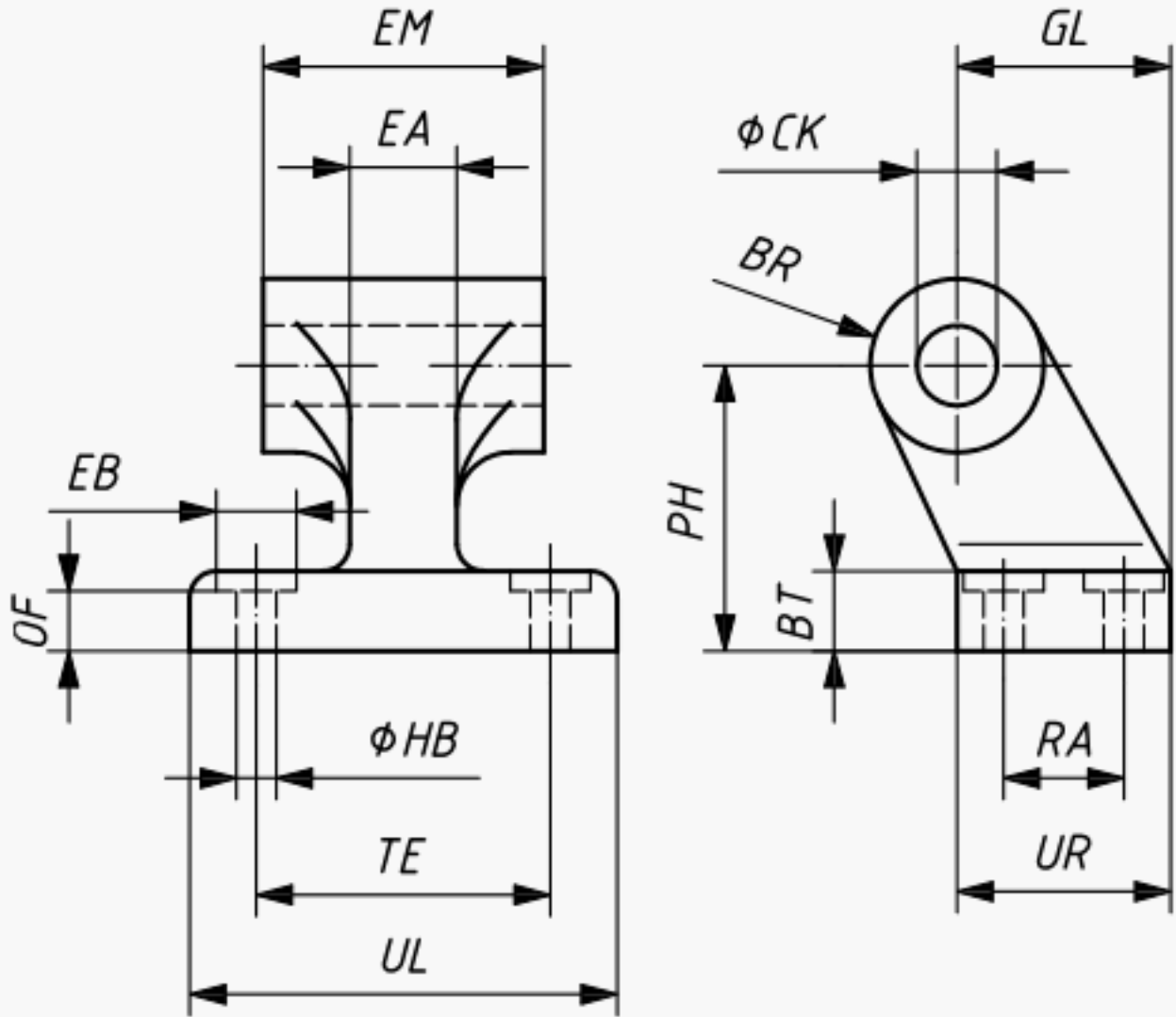


Figure 91 — AB7: Eye bracket, in angle

8 Designation of the position of the ports in round and square types

The designation of the port position can be described for the head and end cap of the cylinder.

— For square type cylinders, port position 1 to port position 4 can be selected as shown in Figure 92.

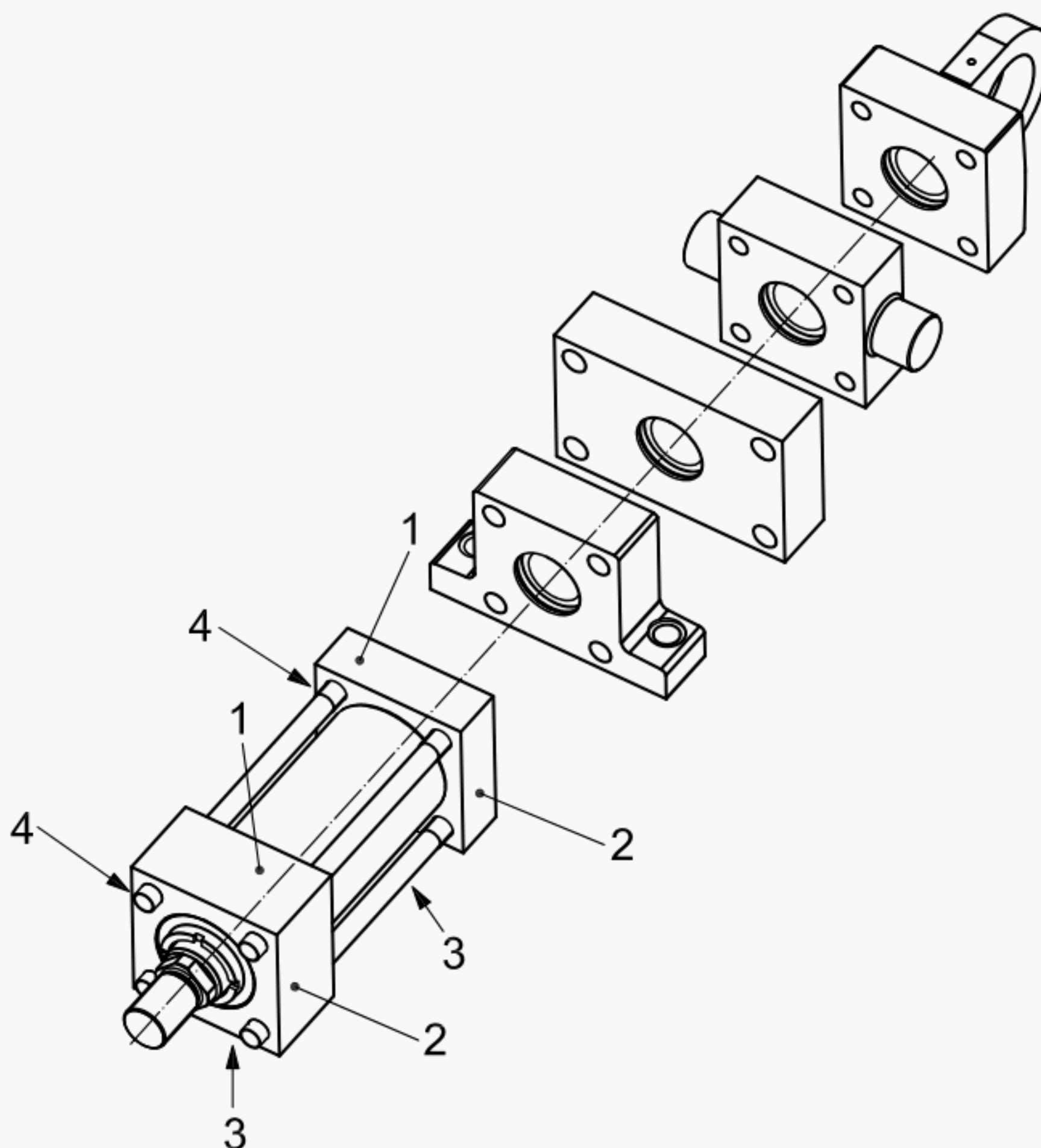


Figure 92 — Port position for square type cylinders

EXAMPLE 1 Example for the designation of the port position:

Port position 1

- For round type cylinders, port position 1 to port position 4 can be selected as shown in Figure 93 or as a sector between two positions.

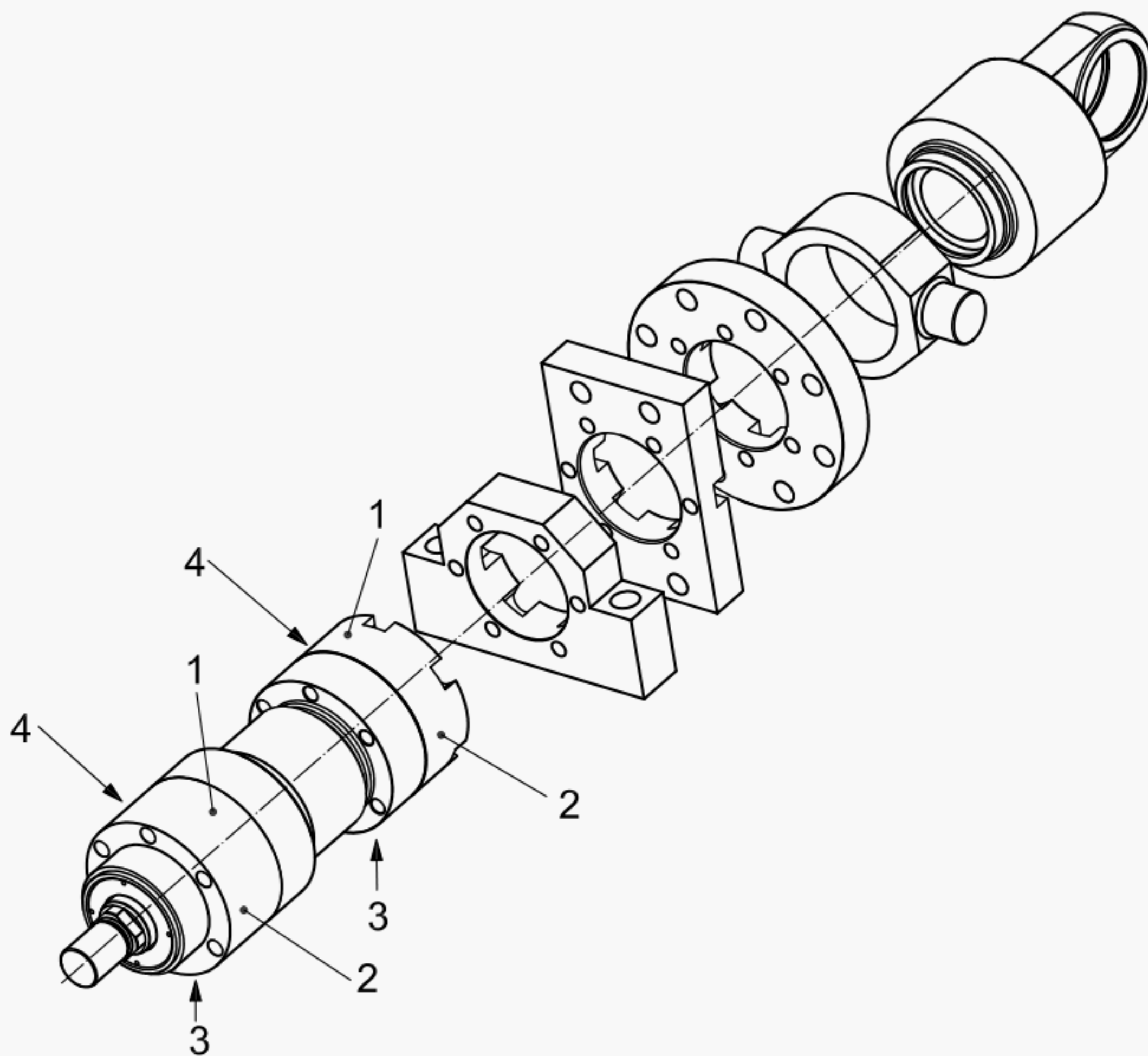


Figure 93 — Port position for round type cylinders

EXAMPLE 2 Example for the designation of the port position:

Port position between 1 and 2

9 Identification statement (Reference to this International Standard)

It is strongly recommended to manufacturers who have chosen to conform to this International Standard that the following statement be used in test reports, catalogues and sales literature:

“Cylinder mounting identification code in accordance with ISO 6099, *Fluid power systems and components — Cylinders — Identification code for mounting dimensions and mounting types.*”

Table 4 — Letter code listing

| Symbol | Designation |
|----------|---|
| <i>A</i> | Thread length of externally threaded rod end (rod end dimensions) |
| <i>B</i> | Diameter of head end pilot (general dimensions — MB 1 — MDB 1 — MB 2 — MDB 2 — ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11) |
| <i>C</i> | |
| <i>D</i> | Ends outer diameter (general dimensions — MB 2 — MDB2) |
| <i>E</i> | End view dimensions (general dimensions — MB 1 — MDB 1 — ME 5 — MDE 5 — ME 6 — MF 1 — MDF 1 — MF 2) |
| <i>F</i> | Thickness of retainer plate (general dimensions — ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11) |
| <i>G</i> | Head thickness (ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11) |
| <i>H</i> | Increase dimension <i>E</i> to facilitate ports (general dimensions — MB 1 — MDB 1 — MB 2 — MDB 2) |
| <i>J</i> | Cap thickness (ME 6 — ME 8 — ME 10 — ME 12) |
| <i>K</i> | |
| <i>L</i> | Clearance around pivot axis (MP 1 — MP 2 — MP 3 — MP 4 — MP 7) |
| <i>M</i> | |
| <i>N</i> | Width of rod eye (AP4 — AP6) |
| <i>O</i> | |
| <i>P</i> | |
| <i>R</i> | Distance between mounting holes (AB2 — ME 5 — MDE 5 — ME 6 — MF 1 — MDF 1 — MF 2 — MF 5 — MDF 5 — MF 6 — ME 11 — MDE 11 — ME 12) |
| <i>S</i> | |
| <i>T</i> | Clearance hole through the mounting face (AB4 — AB6) |
| <i>U</i> | |
| <i>V</i> | |
| <i>W</i> | Distance between TRP ^a and mounting face (MF 1 — MDF 1 — MF 8) |
| <i>X</i> | |
| <i>Y</i> | Distance between TRP and head port (general dimensions) |
| <i>Z</i> | Tilting angle (AP 6 — MP 5 — MP 6) |

Table 4 (continued)

| Symbol 2nd letter <i>A</i> | Designation |
|----------------------------------|--|
| <i>AA</i> | Pitch circle diameter of studs or tie rods (for reference only) (MX1 — MDX 1 — MX 2 — MDX 2 — MX 3 — MX 4 — MDX 4 — MX 5 — MDX 5 — MX 6 — MX 7 — MDX 7 — MX 8 — MDX 8) |
| <i>BA</i> | Diameter of cap pilot (general dimensions — MF 2 — MF 4) |
| <i>CA</i> | Distance between TRP and pivot axis (AP4) |
| <i>DA</i> | Counter sunk diameter for mounting screws (AF3) |
| <i>EA</i> | Rib thickness (AB7) |
| <i>FA</i> | |
| <i>GA</i> | |
| <i>HA</i> | |
| <i>JA</i> | |
| <i>KA</i> | Nut height, recessed (general dimensions) |
| <i>LA</i> | |
| <i>MA</i> | Flange diameter (rod end dimensions) |
| <i>NA</i> | |
| <i>OA</i> | |
| <i>PA</i> | |
| <i>RA</i> | Longitudinal distance (AB7) |
| <i>SA</i> | Longitudinal distance between mounting holes (MS 1) |
| <i>TA</i> | Distance between mounting holes (AB5 — AB6) |
| <i>UA</i> | |
| <i>VA</i> | Cap pilot extension (general dimensions) |
| <i>WA</i> | |
| <i>XA</i> | Distance between TRP and rear mounting holes (MS 1) |
| <i>YA</i> | |
| <i>ZA</i> | |

Table 4 (continued)

| Symbol 2nd letter <i>B</i> | Designation |
|----------------------------------|---|
| <i>AB</i> | Mounting holes diameter (MS 1 — MDS 1 — MS 3) |
| <i>BB</i> | Length of stud or tie rod extension (MX 1 — MDX 1 — MX 2 — MDX 2 — MX 3 — MX 4 — MDX 4 — MX 7 — MDX 7) |
| <i>CB</i> | Clevis slot width (MP 1 — MP 2 — MP 7) |
| <i>DB</i> | Mounting holes for diameter locking plate (AL6) |
| <i>EB</i> | Diameter of mounting hole spot facing (AB7) |
| <i>FB</i> | Mounting holes diameter (MB 1 — MDB 1 — MB 2 — MDB 2 — ME 5 — MDE 5 — ME 6 — ME 7 — MDE 7 — ME 8 — ME 9 — MDE 9 — ME 10 — ME 11 — MDE 11 — ME 12 — MF 1 — MDF 1 — MF 2 — MF 3 — MDF 3 — MF 4 — MF 5 — MDF 5 — MF 6 — MF 7 — MDF 7 — MF 8) |
| <i>GB</i> | |
| <i>HB</i> | Mounting holes diameter (AB2 — AB3 — AB4 — AB5 — AB6 — AB7 — AF3 — AT4) |
| <i>JB</i> | |
| <i>KB</i> | Nut height, exposed (general dimensions) |
| <i>LB</i> | |
| <i>MB</i> | Groove diameter (rod end dimensions) |
| <i>NB</i> | |
| <i>OB</i> | |
| <i>PB</i> | |
| <i>RB</i> | |
| <i>SB</i> | Mounting holes diameter (MS 2 — MDS 2) |
| <i>TB</i> | Distance between mounting holes (AB4) |
| <i>UB</i> | Envelope distance (MP 1 — MP 2 — MP 7) |
| <i>VB</i> | |
| <i>WB</i> | Distance between TRP and mounting face (MF 7 — MDF 7) |
| <i>XB</i> | Distance between hole pin and key way (AB7 — AB5 — AB3) |
| <i>YB</i> | |
| <i>ZB</i> | Distance between TRP and cap end extremity (general dimensions) |

Table 4 (continued)

| Symbol 2nd letter <i>C</i> | Designation |
|----------------------------------|---|
| <i>AC</i> | |
| <i>BC</i> | |
| <i>CC</i> | |
| <i>DC</i> | Groove depth clevis bracket (AA4-L — AA6-L) |
| <i>EC</i> | |
| <i>FC</i> | Pitch circle diameter (MF 3 — MDF 3 — MF 4 — MF 7 — MDF 7) |
| <i>GC</i> | |
| <i>HC</i> | |
| <i>JC</i> | |
| <i>KC</i> | Groove depth for key way (MS 2 — MDS2 — AB3 — AT4) |
| <i>LC</i> | |
| <i>MC</i> | |
| <i>NC</i> | |
| <i>OC</i> | |
| <i>PC</i> | |
| <i>RC</i> | Distance between mounting holes (AB4) |
| <i>SC</i> | |
| <i>TC</i> | Distance between trunnion bases (MT 1 — MDT 1 — MT 2 — MT 5 — MT 6) |
| <i>UC</i> | Envelope diameter (MF 3 — MDF 3 — MF 4 — MF 7 — MDF 7) |
| <i>VC</i> | Extension of pilot on flange (MF 7 — MDF 7) |
| <i>WC</i> | Distance between TRP and mounting face (MF 3 — MDF 3) |
| <i>XC</i> | Distance between TRP and pivot axis (MP 1 — MP 3) |
| <i>YC</i> | |
| <i>ZC</i> | |

Table 4 (continued)

| Symbol 2nd letter <i>D</i> | Designation |
|----------------------------------|--|
| <i>AD</i> | Dimension of trunnion holder (MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>BD</i> | |
| <i>CD</i> | Diameter of pivot hole (MP 1 — MP 2 — MP 3 — MP 4 — MP 7) |
| <i>DD</i> | Thread size (MX 1 — MDX 1 — MX 2 — MDX 2 — MX 3 — MX 4 — MDX 4 — MX 7 — MDX 7) |
| <i>ED</i> | |
| <i>FD</i> | Pitch circle diameter of holes (ME 7 — MDE 7 — ME 8 — MB 2 — MDB 2) |
| <i>GD</i> | |
| <i>HD</i> | |
| <i>JD</i> | |
| <i>KD</i> | |
| <i>LD</i> | |
| <i>MD</i> | |
| <i>ND</i> | |
| <i>OD</i> | Diameter for reducing length of centring RD (ME5 — MDE5 — ME7 — MDE7 — ME9 — MDE9 — ME11 — MDE11) |
| <i>PD</i> | |
| <i>RD</i> | Diameter of retainer plate (ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11) |
| <i>SD</i> | Diameter of hole (AA4-S — AA6-S) |
| <i>TD</i> | Diameter of trunnion pins (MT 1 — MDT 1 — MT 2 — MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>UD</i> | Envelope length (AB2) |
| <i>VD</i> | Pilot extension past retainer plate (general dimensions — MB 1 — MDB 1 — MB 2 — MDB 2 — ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11) |
| <i>WD</i> | Diameter hole for hook wrench holes (rod end dimensions) |
| <i>XD</i> | Distance between TRP and pivot axis (MP 2 — MP 4) |
| <i>YD</i> | |
| <i>ZD</i> | |

Table 4 (continued)

| Symbol 2nd letter <i>E</i> | Designation |
|----------------------------------|--|
| <i>AE</i> | Groove width (rod end dimensions) |
| <i>BE</i> | Mounting thread size (MR 3 — MDR 3 — MR 4) |
| <i>CE</i> | Distance between TRP and pivot axis (AP2) |
| <i>DE</i> | |
| <i>EE</i> | Port size (tapped, general dimensions) |
| <i>FE</i> | Pitch diameter of mounting holes (AF3) |
| <i>GE</i> | |
| <i>HE</i> | |
| <i>JE</i> | |
| <i>KE</i> | Depth of tapped mounting holes (AF3) |
| <i>LE</i> | Clearance around pivot axis (AB2 — AB3 — AB4 — AP2 — AP4) (rod end dimensions) |
| <i>ME</i> | Thickness of flange (MF 5 — MDF 5 — MF 6) |
| <i>NE</i> | Width of rod flange (AF3) |
| <i>OE</i> | |
| <i>PE</i> | |
| <i>RE</i> | Distance between mounting holes (AB5 — AB6) |
| <i>SE</i> | |
| <i>TE</i> | Transversal distance between mounting holes (AB7) |
| <i>UE</i> | Envelope diameter (ME 7 — MDE 7 — ME 8) |
| <i>VE</i> | Head end pilot extension past head (general dimensions, $VE = VD + F$) |
| <i>WE</i> | Distance between TRP and mounting face (MF 5 — MDF 5) |
| <i>XE</i> | |
| <i>YE</i> | |
| <i>ZE</i> | |

Table 4 (continued)

| Symbol 2nd letter <i>F</i> | Designation |
|----------------------------------|--|
| <i>AF</i> | Thread length of tapped rod end (rod end dimensions) |
| <i>BF</i> | Length of mounting screw (MR 3 — MDR 3 — MR 4) |
| <i>CF</i> | Diameter of pivot hole (AB5 — AB6) |
| <i>DF</i> | |
| <i>EF</i> | Clearance radius of pivot axis (AP6) |
| <i>FF</i> | Flange port size (general dimensions) |
| <i>GF</i> | |
| <i>HF</i> | |
| <i>JF</i> | Thickness of flange (MF8) |
| <i>KF</i> | Thread size in tapped rod end (rod end dimensions) |
| <i>LF</i> | Clearance around pivot axis (AP6) |
| <i>MF</i> | Thickness of flange (MF 1 — MDF 1 — MF 2) |
| <i>NF</i> | Thickness of flange (MF 3 — MDF 3 — MF 4 — MF 7 — MDF 7) |
| <i>OF</i> | Distance from spot face to head of brackets (AB7) |
| <i>PF</i> | |
| <i>RF</i> | Distance of mounting holes (AB3) |
| <i>SF</i> | Width of wrench flat (rod end dimensions) |
| <i>TF</i> | Distance between mounting holes (ME 11 — MDE 11 — ME 12 — MF 1 — MDF 1 — MF 2 — MF 5 — MDF 5 — MF 6 — MF 8) |
| <i>UF</i> | Envelope length (MF1 — MDF 1 — MF 2 — MF 5 — MDF 5 — MF 6 — MF 8) |
| <i>VF</i> | |
| <i>WF</i> | Distance between TRP and head of mounting face (general dimensions — MB 1 — MDB 1 — MB 2 — MDB 2 — ME 5 — MDE 5 — ME 7 — MDE 7 — ME 9 — MDE 9 — ME 11 — MDE 11 — MR 3 — MDR 3) |
| <i>XF</i> | |
| <i>YF</i> | |
| <i>ZF</i> | Distance between TRP and back face of rear flange (MF 2) |

Table 4 (continued)

| Symbol 2nd letter <i>G</i> | Designation |
|----------------------------------|--|
| <i>AG</i> | Dimension from TRP to shoulder of the piston (Figure 6) |
| <i>BG</i> | Depth of tapped mounting holes (MX 5 — MDX 5 — MX 6 — MX 7 — MDX 7 — MX 8 — MDX 8) |
| <i>CG</i> | Clevis bracket for spherical bearing slot (AB5 — AB6) |
| <i>DG</i> | Clearance around pivot axis (AB5) |
| <i>EG</i> | |
| <i>FG</i> | Distance between studs and mounting holes (AB3) |
| <i>GG</i> | |
| <i>HG</i> | |
| <i>JG</i> | |
| <i>KG</i> | |
| <i>LG</i> | Clearance around pivot axis (AB6) |
| <i>MG</i> | |
| <i>NG</i> | |
| <i>OG</i> | |
| <i>PG</i> | |
| <i>RG</i> | Distance of mounting bolts (AB3) |
| <i>SG</i> | Threaded depth for screw locking plate |
| <i>TG</i> | Distance between studs or tie rods (MX 1 — MDX 1 — MX 2 — MDX 2 — MX 3 — MX 4 — MDX 4 — MX 5 — MDX 5 — MX 6 — MX 7 — MDX 7 — MX 8 — MDX 8) |
| <i>UG</i> | Envelope length (ME 9 — MDE 9 — ME 10 — ME 11 — MDE 11 — ME 12) |
| <i>VG</i> | |
| <i>WG</i> | Depth of holes for hook wrench (rod end dimensions) |
| <i>XG</i> | Distance between TRP and trunnion axis (MT 1 — MDT 1) |
| <i>YG</i> | |
| <i>ZG</i> | Distance between mounting face and opposite rod shoulder (MDE 5 — MDE 7 — MDE 9 — MDE 11 — MDR 3) |

Table 4 (continued)

| Symbol 2nd letter <i>H</i> | Designation |
|----------------------------------|---|
| <i>AH</i> | Centreline height (MS 1 — MDS 1) |
| <i>BH</i> | |
| <i>CH</i> | Distance between TRP and pivot axis (AP6) |
| <i>DH</i> | |
| <i>EH</i> | Height of the detachable side lugs (MS 2 — MDS 2) |
| <i>FH</i> | |
| <i>GH</i> | |
| <i>HH</i> | |
| <i>JH</i> | |
| <i>KH</i> | |
| <i>LH</i> | Centreline height (MS 2 — MDS 2 — MS 3) |
| <i>MH</i> | |
| <i>NH</i> | Thickness of trunnion bracket (AT4) |
| <i>OH</i> | Height of port face from centreline of cylinder (general dimensions) |
| <i>PH</i> | Centreline height of cylinder with mountings (AB7) |
| <i>RH</i> | |
| <i>SH</i> | |
| <i>TH</i> | Distance of mounting bolts (AT4) |
| <i>UH</i> | Envelope length (AB4) |
| <i>VH</i> | |
| <i>WH</i> | Distance between TRP and mounting face (general dimensions — MX 1 — MDX 1 — MX 3 — MX 4 — MDX 4 — MX 5 — MDX 5 — MX 7 — MDX 7 — MX 8 — MDX 8) |
| <i>XH</i> | Distance between TRP and trunnion axis (MT 5) |
| <i>YH</i> | |
| <i>ZH</i> | Distance between TRP and back face of rear flange (MF 6) |

Table 4 (continued)

| Symbol 2nd letter <i>J</i> | Designation |
|----------------------------------|--|
| <i>AJ</i> | |
| <i>BJ</i> | |
| <i>CJ</i> | Diameter of pivot hole (rod end dimensions) |
| <i>DJ</i> | |
| <i>EJ</i> | |
| <i>FJ</i> | |
| <i>GJ</i> | |
| <i>HJ</i> | |
| <i>JJ</i> | |
| <i>KJ</i> | |
| <i>LJ</i> | Clearance around pivot axis (AB5) |
| <i>MJ</i> | |
| <i>NJ</i> | |
| <i>OJ</i> | |
| <i>PJ</i> | Distance between ports (general dimensions) |
| <i>RJ</i> | |
| <i>SJ</i> | |
| <i>TJ</i> | |
| <i>UJ</i> | Envelope length (AB5 — AB6) |
| <i>VJ</i> | |
| <i>WJ</i> | |
| <i>XJ</i> | Distance between TRP and trunnion axis (MT 2) |
| <i>YJ</i> | |
| <i>ZJ</i> | Distance between TRP and cap end (general dimensions — MB 1 — MB 2 — ME 6 — ME 8 — ME 10 — ME 12 — MR 4 — MX 1 — MX 2 — MX 4 — MX 6 — MX 7 — MX 8) |

Table 4 (continued)

| Symbol 2nd letter <i>K</i> | Designation |
|----------------------------------|---|
| <i>AK</i> | |
| <i>BK</i> | |
| <i>CK</i> | Diameter of pivot holes (AB2 — AB3 — AB4 — AB7 — AP2 — AP4) (rod end dimensions) |
| <i>DK</i> | Pivot pin diameter (AA6-L — AA4-L — AL6) |
| <i>EK</i> | Pivot pin diameter (AA4-S-R) |
| <i>FK</i> | Distance between mounting face and pivot axis (AT4) |
| <i>GK</i> | Thread size for mounting bolts (AB5) |
| <i>HK</i> | |
| <i>JK</i> | Pivot pin diameter (AA6-S-R) |
| <i>KK</i> | Internal or external thread size (rod end dimensions — AP 2 — AP 4 — AP 6 — AF 3) |
| <i>LK</i> | |
| <i>MK</i> | |
| <i>NK</i> | |
| <i>OK</i> | |
| <i>PK</i> | Distance between ports (general dimensions) |
| <i>RK</i> | |
| <i>SK</i> | Thickness of locking plate (AL6) |
| <i>TK</i> | Thickness of detachable trunnion (MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>UK</i> | Envelope length (AB3 — AB5 — AB6) |
| <i>VK</i> | |
| <i>WK</i> | Distance between TRP and axis of holes for hook wrench (rod end dimensions) |
| <i>XK</i> | |
| <i>YK</i> | |
| <i>ZK</i> | Distance between TRP and opposite head face (general dimensions — MDB 1 — MDB 2) |

Table 4 (continued)

| Symbol 2nd letter <i>L</i> | Designation |
|----------------------------------|--|
| <i>AL</i> | Cylinder bore (general dimensions) |
| <i>BL</i> | |
| <i>CL</i> | Mounting clevis lengths (AB3 — AB4 — AP2) |
| <i>DL</i> | Spherical eye bracket mounting face to pivot axis (MP 6) |
| <i>EL</i> | Mounting length of pin (AA4-S-R) |
| <i>FL</i> | Mounting face to pivot axis (MP 2 — MP 4 — MP 7 — AB2 — AB3 — AB4) |
| <i>GL</i> | Distance between mounting holes and pivot bolt (AB5 — AB7) |
| <i>HL</i> | Clevis slot width for locking plate (AA6-L — AA4-L) |
| <i>JL</i> | Length of nut flat (AA6-L — AA4-L) |
| <i>KL</i> | Distance of clevis slot (AA6-L — AA4-L) |
| <i>LL</i> | |
| <i>ML</i> | Length of pivot pin, plain (AA4-S-R) |
| <i>NL</i> | Length of pivot pin, spherical bearing (AA6-R-S) |
| <i>OL</i> | Length of pivot pin, plain locking plate (AA4-L) |
| <i>PL</i> | Distance between cap port and cap end (general dimensions) |
| <i>RL</i> | |
| <i>SL</i> | Length of pivot pin, spherical bearing locking plate (AA6-L) |
| <i>TL</i> | Length of trunnion pins (MT 1 — MDT 1 — MT 2 — MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>UL</i> | Envelope length (AB7 — AT4) |
| <i>VL</i> | Length of pilot diameter (ME 5 — MDE 5) |
| <i>WL</i> | Length of wrench flats (rod end dimensions) |
| <i>XL</i> | Distance between TRP and trunnion axis (MT 6) |
| <i>YL</i> | Length of locking plate (AL6) |
| <i>ZL</i> | Distance between TRP and opposite head end extremity except rod (general dimensions) |

Table 4 (continued)

| Symbol 2nd letter | Designation |
|----------------------|---|
| <i>M</i> | |
| <i>AM</i> | |
| <i>BM</i> | |
| <i>CM</i> | Rod clevis slot width, clevis bracket slot width (AB3 — AB4 — AP2) |
| <i>DM</i> | |
| <i>EM</i> | Eye bracket eye width, rod eye, plain eye width (AB2 — AB7 — AP4) (rod end dimensions) |
| <i>FM</i> | Mounting face to pivot axis (AB5 — AB6) |
| <i>GM</i> | |
| <i>HM</i> | |
| <i>JM</i> | |
| <i>KM</i> | |
| <i>LM</i> | |
| <i>MM</i> | Rod diameter, <i>d</i> (general dimensions) |
| <i>NM</i> | |
| <i>OM</i> | |
| <i>PM</i> | Distance between far port and far end (general dimensions) |
| <i>RM</i> | |
| <i>SM</i> | Longitudinal distance between mounting holes (MDS 1) |
| <i>TM</i> | Distance between trunnion bases (MT 4 — MDT 4) |
| <i>UM</i> | Envelope distance (MT 4 — MDT 4) |
| <i>VM</i> | |
| <i>WM</i> | |
| <i>XM</i> | Distance between TRP and opposite holes (MDS 1) |
| <i>YM</i> | |
| <i>ZM</i> | Distance between TRP and opposite rod shoulder (general dimensions — MDB 1 — MDB 2 — MDS 1 — MDS 2 — MDX 1 — MDX 7 — MDX 8) |

Table 4 (continued)

| Symbol 2nd letter <i>N</i> | Designation |
|----------------------------------|---|
| <i>AN</i> | |
| <i>BN</i> | |
| <i>CN</i> | Diameter of pivot holes (AP6) |
| <i>DN</i> | |
| <i>EN</i> | Spherical bearing width (AP6) |
| <i>FN</i> | Overall height of trunnion bracket (AT4) |
| <i>GN</i> | |
| <i>HN</i> | |
| <i>JN</i> | |
| <i>KN</i> | |
| <i>LN</i> | |
| <i>MN</i> | |
| <i>NN</i> | |
| <i>ON</i> | |
| <i>PN</i> | |
| <i>RN</i> | |
| <i>SN</i> | |
| <i>TN</i> | |
| <i>UN</i> | |
| <i>VN</i> | |
| <i>WN</i> | |
| <i>XN</i> | Distance between TRP and pivot axis (MP 6) |
| <i>YN</i> | |
| <i>ZN</i> | Distance between mounting face and opposite TRP (MDF 3) |

Table 4 (continued)

| Symbol 2nd letter <i>O</i> | Designation |
|----------------------------------|---|
| <i>AO</i> | Distance from mounting holes to cylinder's mounting face (MS 1 — MDS 1 — MS 2 — MDS 2 — MS 3) |
| <i>BO</i> | |
| <i>CO</i> | Width of key way (MS 2 — MDS 2 — AB3 — AT4) |
| <i>DO</i> | |
| <i>EO</i> | |
| <i>FO</i> | Distance between clevis slot and pivot axis (AB3) |
| <i>GO</i> | Distance between clevis slot and mounting holes axis (MS 2 — MDS 2) |
| <i>HO</i> | |
| <i>JO</i> | Distance of mounting bolts for locking plate (AB5) |
| <i>KO</i> | Distance of mounting bolts for locking plate (AB5) |
| <i>LO</i> | Distance for pin hole from envelope length (AB5) |
| <i>MO</i> | |
| <i>NO</i> | |
| <i>OO</i> | |
| <i>PO</i> | |
| <i>RO</i> | |
| <i>SO</i> | |
| <i>TO</i> | Distance between mounting holes (MB 1 — MDB 1 — ME 5 — MDE 5 — ME 6) |
| <i>UO</i> | Envelope length (ME 5 — MDE 5 — ME 6) |
| <i>VO</i> | |
| <i>WO</i> | |
| <i>XO</i> | Distance between TRP and pivot axis (MP 5) |
| <i>YO</i> | |
| <i>ZO</i> | Distance between TRP and mounting face (MDX 1 — MDX 2 — MDX 4 — MDX 7 — MDX 8) |

Table 4 (continued)

| Symbol 2nd letter <i>P</i> | Designation |
|----------------------------------|---|
| <i>AP</i> | Distance from mounting holes to cylinder mounting face (MS 2 — MDS 2) |
| <i>BP</i> | |
| <i>CP</i> | Mounting clevis envelope length (AB5 — AB6) |
| <i>DP</i> | |
| <i>EP</i> | Eye width (MP 5 — MP 6) |
| <i>FP</i> | |
| <i>GP</i> | |
| <i>HP</i> | |
| <i>JP</i> | Distance of mounting bolts for locking plate (AB5) |
| <i>KP</i> | Distance of mounting bolts for locking plate (AB5) |
| <i>LP</i> | |
| <i>MP</i> | |
| <i>NP</i> | |
| <i>OP</i> | |
| <i>PP</i> | |
| <i>RP</i> | |
| <i>SP</i> | |
| <i>TP</i> | |
| <i>UP</i> | Outside diameter for rod flange (AF3) |
| <i>VP</i> | |
| <i>WP</i> | |
| <i>XP</i> | |
| <i>YP</i> | |
| <i>ZP</i> | Distance between TRP and back face of rear flange (MF 4) |

Table 4 (continued)

| Symbol 2nd letter <i>R</i> | Designation |
|----------------------------------|---|
| <i>AR</i> | Distance from mounting holes to cylinder mounting face (MS 2 — MDS 2) |
| <i>BR</i> | Radius of eye bracket in angle (AB7) |
| <i>CR</i> | Hole for bolt at trunnion bracket (AT4) |
| <i>DR</i> | |
| <i>ER</i> | Clearance radius of pivot axis (AP2 — AP4) |
| <i>FR</i> | |
| <i>GR</i> | |
| <i>HR</i> | |
| <i>JR</i> | |
| <i>KR</i> | |
| <i>LR</i> | |
| <i>MR</i> | Clearance radius of pivot axis (MP 1 — MP 2 — MP 3 — MP 4 — MP 7 — AB2 — AB3 — AB4) |
| <i>NR</i> | |
| <i>OR</i> | |
| <i>PR</i> | |
| <i>RR</i> | |
| <i>SR</i> | Clearance radius of pivot axis (AB5 — AB6) |
| <i>TR</i> | End view distance between mounting holes (MS 1 — MDS 1 — MS 3) |
| <i>UR</i> | Envelope length (MF 8 — AB4 — AB7) |
| <i>VR</i> | |
| <i>WR</i> | |
| <i>XR</i> | Distance between trunnion axis and opposite rod shoulder (MDT 1) |
| <i>YR</i> | |
| <i>ZR</i> | Distance between mounting face and opposite TRP (MDF 1) |

Table 4 (continued)

| Symbol 2nd letter <i>S</i> | Designation |
|----------------------------------|---|
| <i>AS</i> | Length of the flange piston rod end (rod end dimensions) |
| <i>BS</i> | |
| <i>CS</i> | Outside diameter of stop disc at clevis bracket (AB5) |
| <i>DS</i> | |
| <i>ES</i> | Mounting length of pin (AA6-S, AA6-R) |
| <i>FS</i> | Distance of mounting holes (AT4) |
| <i>GS</i> | |
| <i>HS</i> | |
| <i>JS</i> | |
| <i>KS</i> | |
| <i>LS</i> | |
| <i>MS</i> | Clearance radius of pivot axis (MP 5 — MP 6) |
| <i>NS</i> | |
| <i>OS</i> | |
| <i>PS</i> | |
| <i>RS</i> | |
| <i>SS</i> | Longitudinal distance between mounting holes (MS 2) |
| <i>TS</i> | End view distance between mounting holes (MS 2 — MDS 2) |
| <i>US</i> | Envelope length (MS 2 — MDS 2 — MS 3) |
| <i>VS</i> | |
| <i>WS</i> | Distance from TRP to mounting face on cylinder head (Figure 9) |
| <i>XS</i> | Distance between TRP and front mounting holes (MS 2 — MDS 2 — MS 3) |
| <i>YS</i> | |
| <i>ZS</i> | Distance between mounting face and opposite TRP (MDF 7) |

Table 4 (continued)

| Symbol 2nd letter <i>T</i> | Designation |
|----------------------------------|---|
| <i>AT</i> | Angle mounting thickness (MS 1 — MDS 1) |
| <i>BT</i> | Rib thickness (AB7) |
| <i>CT</i> | |
| <i>DT</i> | |
| <i>ET</i> | |
| <i>FT</i> | |
| <i>GT</i> | |
| <i>HT</i> | |
| <i>JT</i> | |
| <i>KT</i> | |
| <i>LT</i> | Clearance around pivot axis (MP 5 — MP 6) |
| <i>MT</i> | |
| <i>NT</i> | |
| <i>OT</i> | |
| <i>PT</i> | |
| <i>RT</i> | Size of tapped mounting holes (MX 5 — MDX 5 — MX 6 — MX 7 — MDX 7 — MX 8 — MDX 8) |
| <i>ST</i> | Lug height (MS 2 — MDS 2) |
| <i>TT</i> | |
| <i>UT</i> | Envelope length (MT 1 — MDT 1 — MT 2 — MT 5 — MT 6) |
| <i>VT</i> | |
| <i>WT</i> | |
| <i>XT</i> | Distance of mounting holes at locking plate (AL6) |
| <i>YT</i> | |
| <i>ZT</i> | |

Table 4 (continued)

| Symbol 2nd letter <i>U</i> | Designation |
|----------------------------------|--|
| <i>AU</i> | Distance from mounting holes to cylinder mounting faces (MS 1 — MDS 1 — MS 2 — MDS 2 — MS 3) |
| <i>BU</i> | Width of locking plate (AL6) |
| <i>CU</i> | Distance between mounting bolts and pivots pin centre (AL6) |
| <i>DU</i> | |
| <i>EU</i> | Eye width (AP6) |
| <i>FU</i> | |
| <i>GU</i> | |
| <i>HU</i> | |
| <i>JU</i> | |
| <i>KU</i> | |
| <i>LU</i> | |
| <i>MU</i> | |
| <i>NU</i> | |
| <i>OU</i> | |
| <i>PU</i> | |
| <i>RU</i> | |
| <i>SU</i> | |
| <i>TU</i> | |
| <i>UU</i> | |
| <i>VU</i> | |
| <i>WU</i> | |
| <i>XU</i> | |
| <i>YU</i> | |
| <i>ZU</i> | Distance between mounting face and opposite TRP (MDF 5) |

Table 4 (continued)

| Symbol 2nd letter <i>V</i> | Designation |
|----------------------------------|--|
| <i>AV</i> | Length of tapped hole (AP2 — AP4 — AP6) |
| <i>BV</i> | Pilot diameter (MF 7 — MDF 7) |
| <i>CV</i> | Centreline of axis and the top (AP2 — AP4) |
| <i>DV</i> | |
| <i>EV</i> | |
| <i>FV</i> | |
| <i>GV</i> | |
| <i>HV</i> | |
| <i>JV</i> | |
| <i>KV</i> | Distance across nut flats (MR 3 — MDR 3 — MR 4) |
| <i>LV</i> | |
| <i>MV</i> | |
| <i>NV</i> | |
| <i>OV</i> | |
| <i>PV</i> | |
| <i>RV</i> | |
| <i>SV</i> | Longitudinal distance between mounting holes (MDS 2) |
| <i>TV</i> | Distance between mounting holes (ME 9 — MDE 9 — ME 10) |
| <i>UV</i> | Envelope diameter (MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>VV</i> | |
| <i>WV</i> | |
| <i>XV</i> | Distance between TRP and trunnion axis (MT 4 — MDT 4) |
| <i>YV</i> | |
| <i>ZV</i> | Nut flat width for pivot pin (AA4-L — AA6-L) |

Table 4 (continued)

| Symbol 2nd letter <i>W</i> | Designation |
|----------------------------------|--|
| <i>AW</i> | |
| <i>BW</i> | |
| <i>CW</i> | Centreline of axis and the top (AP6) |
| <i>DW</i> | |
| <i>EW</i> | Eye width (MP 3 — MP 4) |
| <i>FW</i> | |
| <i>GW</i> | |
| <i>HW</i> | |
| <i>JW</i> | |
| <i>KW</i> | Nut thickness (MR 3 — MDR 3 — MR 4) |
| <i>LW</i> | |
| <i>MW</i> | |
| <i>NW</i> | |
| <i>OW</i> | |
| <i>PW</i> | |
| <i>RW</i> | |
| <i>SW</i> | |
| <i>TW</i> | |
| <i>UW</i> | End view envelope dimension (MT 4 — MDT 4 — MT 5 — MT 6) |
| <i>VW</i> | |
| <i>WW</i> | |
| <i>XW</i> | Distance between TRP and pivot axis (MP 7) |
| <i>YW</i> | |
| <i>ZW</i> | |

Table 4 (continued)

| Symbol 2nd letter | Designation |
|--|---|
| <i>X</i> | |
| <i>AX</i> | |
| <i>BX</i> | |
| <i>CX</i> | Diameter of pivot hole (MP 5 — MP 6) |
| <i>DX</i> | |
| <i>EX</i> | Spherical bearing width (MP 5 — MP 6) |
| <i>FX</i> | |
| <i>GX</i> | |
| <i>HX</i> | |
| <i>JX</i> | |
| <i>KX</i> | |
| <i>LX</i> | |
| <i>MX</i> | |
| <i>NX</i> | |
| <i>OX</i> | |
| <i>PX</i> | |
| <i>RX</i> | |
| <i>SX</i> | |
| <i>TX</i> | |
| <i>UX</i> | Envelope length of clevis bracket (AB3) |
| <i>VX</i> | |
| <i>WX</i> | |
| <i>XX</i> | |
| <i>YX</i> | |
| <i>ZX</i> | Chamfer at pivot pin (AA6-L — AA4-L) |
| ^a TRP is defined in Clause 4. | |

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